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SHANG BRONZES
IN THE FRIER GALLERY OF ART

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Shang Bronzes

in the Freer Gallery of Art

by Daniel Freeman, Gregory Hall, Christopher Hyson, Nicholas Lee,
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edited by Robert Bagley

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Preface and Acknowledgements

This catalogue was undertaken as a class project by the seven undergraduates who took my seminar on Shang bronzes, Art 573, in the spring semester of 1998. At the time I suggested the project, the consideration uppermost in my mind was the vast amount of archaeological work that has been done in China in the three decades since the last catalogue of the Freer bronzes was published in 1967. It seemed to me that much more could now be said about the Freer bronzes, for they could be compared with archaeologically provenanced objects and not just with the bronzes in museum collections that were the main resource of the authors of the 1967 catalogue: those authors could not know that an intact royal tomb would be excavated at Anyang in 1976, that it would be securely datable to the reign of the first Anyang king, and that its staggering wealth of bronzes would supply, for instance, a close parallel to the Freer *zun* 51.19 (see No. 14 and Fig. 14.2). By a lucky chance the spring 1998 semester coincided with the Guggenheim Museum's exhibition *China 5000 Years*, and the spectacular bronzes included in that exhibition gave the students first-hand experience of newly excavated archaeological material.

However, while the finished catalogue is informed throughout by recent archaeology, the interests of the seven authors (and, I might add, of their professor) more often led them in other directions, and most of them found it more interesting to write about the Freer bronzes than to amass archaeological documentation related to the Freer bronzes. Thanks to the extraordinary hospitality of the Freer Gallery, we were able to spend four days in the Freer storeroom examining the bronzes. Stimulated always by the meticulous technical descriptions that R. J. Gettens supplied for the 1967 Freer catalogue, we found so much to say about these objects, and the problem of saying it well so challenging, that archaeology ended up taking a back seat to observation and

description; archaeological information has much of the time been dealt with summarily by supplying references to my own 1987 catalogue of the Sackler Shang bronzes.

The 1967 catalogue covered all the Freer bronze vessels from Shang to Han, a total of 122 objects. The 47 bronzes that we chose to catalogue include all those which the 1967 catalogue dated to the Shang period (though one or two of these might well be Zhou); a few borderline objects which that catalogue dated Western Zhou but which might well be Shang; and five Shang objects that the Gallery has acquired since 1967. We have excluded objects that the authors of the 1967 catalogue judged not ancient.

Our debt to the 1967 catalogue, and above all to the work of Gettens, is so large and so pervasive that footnotes, though we have often used them, are a very incomplete acknowledgement. Many of Gettens's observations depend on metal analysis, X-ray radiography, and other technical procedures that we did not employ, and in such cases we have relied on his statements. Whenever his observations were of a kind that we could check, however, we have checked them: the mold marks we report are mold marks we have seen. When our observations agree with his, we have generally not cited him. In a few very interesting cases, our observations disagree, and in those cases we have of course tried to explain our views and his as clearly as possible. Perhaps because one of his coauthors, Noel Barnard, was convinced that replication techniques were used extensively in the manufacture of Shang bronzes, Gettens was a little too willing to entertain the possibility of replicated decoration, and he saw evidence of it in places where closer examination would have ruled it out (see e.g. No. 22 note 2).

Our debt to the hospitality of the Freer Gallery and its staff is impossible to acknowledge adequately. We are deeply grateful to Dr. Jenny So, Curator of Ancient Chinese Art, for much assis-

tance; to the Freer Technical Laboratory, for allowing us access to its files; and above all to the Gallery itself, for its unparalleled commitment to making its collections accessible for study, and to Ms. Tara Coram of the Freer storeroom, who made that commitment a daily reality.

With a few exceptions, the illustrations of Freer objects and inscription rubbings reproduced here are copied from the 1946 and 1967 Freer catalogues or from photographs supplied by the Gallery. Twelve copies of the catalogue have been produced: one for each author, two for the editor, one for the director of the Freer Gallery, Dr. Milo Beach, one for Dr. Jenny So, and one for the library of the Freer Gallery. We are happy to allow the material presented herein to be used by other scholars and request only that we be cited appropriately. The authors, identified by initials at the end of each entry, are Daniel Freeman, Gregory Hall, Christopher Hyson, Nicholas Lee, David Ta-Wey Liu, Peter Lu, and Margaret Upton.

For harmonizing seven incompatible floppy disks and transforming them into a book, special thanks are due to Peter Lu, whose omnicompetence includes a magical ability to make computers do his bidding.

Finally, I would like to add my personal thanks to the Freer Gallery and to my students, who made this the most enjoyable course I have ever taught, and who made me take a closer look at some bronzes I thought I knew.

Robert Bagley
Princeton University
June 1998

Contents

Jue and jiao

1. *jue* 1986.6
2. *jue* 56.19
3. *jue* 25.3
4. *jue* 54.15
5. *jiao* 53.83

Jia

6. *jia* 23.1
7. *jia* 07.37
8. *fang jia* 35.12

Gu

9. *gu* 40.3
10. *gu* 51.18
11. *gu* 43.9
12. *gu* fragment 17.202
13. *gu* 11.51

Shouldered zun

14. *zun* 51.19
15. *fang zun* 25.2

Cylindrical zun

16. *zun* 55.1
17. *zun* 07.34
18. *zun* 78.29
19. *zun* 44.1

You

20. round *you* 74.31
21. owl *you* 42.14
22. *you* 40.11
23. *you* 11.36
24. *you* 11.37
25. cylindrical *you* 09.258

Hu

26. *hu* 49.5
27. *hu* 48.1

Zhi

28. *zhi* 38.6
29. *zhi* 79.47

Fang yi

30. *fang yi* 1991.3
31. *fang yi* 54.13
32. *fang yi* 15.136

Pou

33. *pou* 09.334
34. *pou* 13.30

Guang

35. *guang* 38.5
36. *guang* 39.53
37. *guang* 61.33

Lid (pou or zun?)

38. *lid* 74.3

Animal-shaped zun

39. elephant *zun* 36.6

He

40. *he* 42.1

Pan

41. *pan* 56.26

Yu or gui

42. *yu* [18]94.17
43. *yu* 41.8

Ding

44. *ding* 60.18
45. *ding* 59.15
46. *ding* 46.31
47. *ding* 47.11

No. 1. *Jue* (1986.6)

Height 14.8 cm to top of posts, 13.1 cm to tip at rear

Length 13.1 cm spout to tail

Weight 230.2 g

Not inscribed

This small flat-bottomed vessel of pointed oval cross-section is an excellent example of an early *jue*. Below the rim, the body tapers inward, then abruptly flares outward to a wide skirt which rests on three slender triangular legs. Two posts, convex at the rear and concave in front, rise approximately 1.5 cm from the place where the vessel's spout joins the body. The raised inside rim forms a distinct line 0.5 cm wide along the mouth of the vessel from the base of one post to the base of the other. The area just above the skirt contains the vessel's only decoration. A *taotie* in thread relief with high-relief eyes adorns the side of the vessel opposite the handle; on the side with the handle the vessel's designer appears to have been less ambitious, as the *taotie*'s eyes are not drawn in high relief. The handle is a simple strap, thin at the middle and widening toward the points where it joins the body. The decoration does not run continuously under the handle.

The vessel was clearly cast in one pour, complete with legs and handle, but the mold marks that are visible do not make the structure of the mold assembly entirely clear. It must have had a horizontal division between skirt and legs, for the mold marks on the legs are not aligned with those on the body above. Although it has largely been ground away, a mold mark can be found running down the underside of the spout, through the band of decoration, and down the front edge of the skirt; another runs down the rear of the body, on axis with the tip. The mold for the body appears to have been in two halves that slipped relative to each other during assembly or casting: the side bearing the handle appears to have shifted toward the rear tip of the vessel while the other side appears to

have shifted towards the spout.¹ As for the legs, there are clear signs that this part of the mold had three divisions, running down the front face of each leg, up its back edge, and from there to the centre of the vessel's bottom: a conspicuous mold mark runs down the centre of the outside face of each leg, and mold marks on the bottom run from the legs to converge at a point. However, it is unclear (a) why only one half of the outer face of each leg is flush with the skirt of the vessel; and (b) why the legs were not stably positioned at 120° intervals but instead arranged with two legs 160° apart and the third leg, the one below the handle, about 100° from the other two. The tops of the posts appear to have been smoothed by abrasion, which might be taken to suggest that they served as casting sprues, although this suggestion has been contested.² A large ancient repair has been cast into the skirt. The leg under the handle has been broken off at the top and glued, not soldered, back on. The tip of this leg has also been broken off and repaired.

It is fitting that the Freer Gallery's earliest bronze vessel should be a *jue*, as this seems to be the earliest vessel type made in bronze. By no means do bronze vessels represent the earliest form of metalwork in China, however. A brief sketch of early Chinese metallurgy will demonstrate the great technical achievement represented by this seemingly simple object and the place of the vessels contained in this catalogue in world metallurgical history.³

Ores were first used in palaeolithic times not as sources of metal, but as pigments for cave paintings. It seems that humans first became interested in metal when they saw pure copper -- "native copper" -- in nature. Native copper

was abraded, drilled, polished, and perhaps even hammered beginning around the ninth millennium BC. On present evidence it was first annealed (heated past the recrystallization temperature, 400 - 500°C, to remove brittleness and facilitate further hammering) in Anatolia in the eighth or seventh millennium BC, and first melted and cast in open molds in the sixth millennium. Two-part molds seem to have been used in Iran by 3500 BC. As supplies of native copper ran out, ores began to be smelted: secondary ores (oxides and carbonates) by the fifth millennium, and primary ores (sulfides) by the fourth millennium. No doubt at first by accident, copper was sometimes alloyed with arsenic as early as the fourth millennium, thereafter increasingly often with tin instead.

This long series of metallurgical experiments that archaeologists have traced in the Near East may or may not have occurred independently in China, where on present evidence metal use began no earlier than the late third millennium. But concern with the vexed question of independent invention should not distract us from the at least equally interesting question of what a particular society did with an invention (in the words of the 18th century Scottish philosopher Adam Ferguson, when nations “borrow from their neighbors, they probably borrow only what they are nearly in a position to invent for themselves”). Whatever the source or origin of their metallurgical knowledge, second-millennium societies in China put metal to unique uses.

The earliest evidence for the use of metal in China is from the Qijia culture⁴ of Gansu, which seems to have possessed a small-scale metal industry around 2000 BC. Approximately 350 sites belonging to the Qijia culture are known in eastern Gansu and have yielded copper rings, ornaments, and tools. While many of these were hammered, some were cast in bivalve and more complex molds. The connection between the metalwork of the Qijia culture and the succeeding Erlitou culture can not be established with certainty, but the two metal industries are similar except in the uses to which

metal was put: the growth in artistic quality and scale of production seen at the early second-millennium Erlitou site reflects the social stratification and industrial organization that characterize the urban revolution in China.

The critical difference between bronze work in China and the West is one of technique: while bronzesmiths in the West have relied heavily on hammering to shape metal, their Chinese counterparts relied almost exclusively on casting. What can account for this difference? The different techniques appear to have been dictated primarily by the different abundance of metal in the West and China. In the ancient Near East, metal was very costly, and labor-intensive methods of hammering and shaping extremely thin metal artifacts became commonplace because they saved metal. Vessels were especially easy to make by hammering, and outside China they were almost never cast: it is doubtful that any ancient metal vessel made anywhere else in the world approaches the weight of the largest surviving bronze vessel from ancient China, the *Si Mu Wu fang ding* found at Anyang, which weighs about 875 kg and must have required the efforts of an entire factory of people.

Geology played a large role in all this: China had the largest copper and tin mines in the ancient world. If metal had been scarce, Chinese bronze casters would not have relied exclusively on casting, and their artistic efforts would not have been channeled into cast decoration. Moreover the division of labor encouraged by reliance on casting techniques appears to have pushed bronze work in China in the direction of industrial organization, in sharp contrast to the lone artisans often responsible for metalwork in the ancient West. Robert Bagley draws three inferences from the rise of bronze vessels with cast decoration in China: (1) kings must have had abundant supplies of metal; (2) they must have been able to support large factories; (3) they must have given their casters free rein to create their own decoration, allowing them to develop motifs such as the imaginary *taotie* and other designs

which have a dialectical relationship with the section-mold casting techniques with which they were used.

The Freer *jue* appears to have been produced by the Erligang culture, a mid second-millennium successor to the Erlitou culture. A similar *jue* in the British Museum exhibits the same mold marks on the base and legs and the same short spout, oval body, and slightly flared skirt.⁵ The above mentioned features (with the exception of the mold markings) contrast sharply with the long spouts, narrow waists, and slender slightly splayed legs that characterize *jue* vessels found at Erlitou,⁶ and the similarity of the Freer and British Museum pieces to vessels unearthed at Zhengzhou⁷ argues for an Erligang date. No bronze thus far found at Erlitou is decorated with a *taotie*.

DMF

¹ Report of technical examination by W.T. Chase, 21 May 1986, Freer Technical Laboratory files.

² Rawson 1987, p. 60.

³ The following discussion draws on Bagley 1999 and Bagley, Art 215 lectures, fall 1997. For more detail about the early history of the exploitation of metals see Wertine 1980.

⁴ The word “culture” is used here in the archaeological sense to refer to a group of people who had the same material culture. Whether our sorting of peoples on the evidence of their material remains agrees with the way they sorted themselves is, of course, the central question of archaeology.

⁵ Rawson 1987, p. 60. There is one major difference between the Freer and the British Museum *jue*: while the Freer piece is almost entirely decorated in Style I, the British Museum piece is decorated in Style I on the side bearing the handle and in Style II on the opposite face (perhaps for some technical reason casters were as yet unequipped or unwilling to attempt Style II decoration on the same side as the handle).

⁶ See the Erlitou *jue* in Bagley 1987, fig. 14.

⁷ See the Zhengzhou *jue* in Bagley 1987, fig. 35.

No. 2. *Jue* (56.19)

Height 19.7 cm

Weight 74 g

Inscription of one character

Pope 1967, no. 23

This *jue* is a tripod pouring vessel with capped posts at the base of the pouring spout. The conical post-caps carry a whorl pattern. The vessel is circular in cross section and has a clay-cored handle above one of the three pointed legs. The legs are triangular in section. The rim of the vessel is drawn out to a pouring spout to the left of the handle and a triangular tail to the right. Underneath the flaring rim are seven *leiven*-filled triangles, some of them elongated beneath the spout and tail. The main register of decoration is composed of two Style IV *taotie* with eyes in high relief. Each *taotie* is framed by flanges and bisected in one case by a third flange, in one case by the handle. Below this register of decoration the vessel is plain.

Underneath the handle is an inscription of one character consisting of a foot, an upside-down man with no head, and two right-angled lines. Shima Kunio's concordance lists four oracle-bone inscriptions that contain this graph. In one of them the graph is isolated but in the other three the context is sufficient to show that it serves as a place name.¹ Here it may be the name of a person or clan.

It seems clear that the vessel was cast in one piece, but it is difficult to tell exactly how many mold sections were used. Vertical mold marks can be discerned on the flanges, the sides of the handle and inscription, down the inside edges of the knife-shaped legs, and underneath the post caps. Between the register of triangles and the *taotie* as well as below the *taotie* register are raised horizontal lines; the lines hardly amount to evidence of horizontal mold divisions, but their locations are logical places for such divisions. The inscription and the inner face of the handle were probably formed by a semicircular mold piece, of

which traces remain in the handle. A small bit of metal that protrudes beyond the surface of this clay was probably formed when metal seeped into a hole in the clay during casting. The clay core also extends slightly over the unpolished inscription area underneath the handle. The inscription has raised edges, suggesting that the original for it was made by pushing a stamp into soft clay. No spacers are apparent. There are shrinkage depressions in all of the legs, which were cast solid and approach the upper limit of metal thickness in ancient Chinese vessels.

With the exception of the rough inscription area and some areas of red corrosion in the *leiven*, most of the vessel has a smooth green patina. In the center of the bottom are three holes which have been recently plugged with new metal and painted to match the surface. These holes were drilled for analytical reasons in the 1960s by Gettens.² With the exception of this modern repair of a modern blemish the vessel seems to be completely intact.

The *jue* is one of the oldest bronze vessel shapes and is commonly found at pre-Anyang sites. Vessels such as the Freer *jue* No. 1 with its Style I *taotie* are among these early examples, which have an almond-shaped cross section. The posts on the earliest examples are stumpy and lack caps. In later examples, the length of the pouring spout is greater, as is the size of the posts and caps. The legs typically are more noticeably splayed in later examples, and the vessels become more substantial and elegantly proportioned. The *jue* No. 2 belongs with these later examples; it is not too different, perhaps, from some of the *jue* found in Fu Hao's tomb.³

The *jue* shape belongs to a family of tripod pouring vessels that includes also the *jiao* and the

jia. The *jia* is a tripod with a handle and capped posts, but without a pouring spout and tail.⁴ The much rarer *jiao* shape is essentially a *jue* in which the posts and spout have been eliminated in favor of two symmetrical tails; sometimes a lid is added.⁵

CFH

¹ Shima 1971, p. 324.

² Pope 1967, p. 141.

³ Bagley 1987, fig. 12.1.

⁴ The *jia* No. 6 is an example of this type. Of special note are the splayed legs and exceptionally large capped posts.

⁵ The *jiao* No. 5, while decorated with patterns related to Style III, is a comparatively late example of this type.

No. 3. *Jue* (25.3)

Height 25 cm

Width 22.5 cm

Weight 1.11 kg

Not inscribed

Pope 1967, no. 25; Lodge 1946, pl. 3

The heavy bowl of this *jue* extends well below the join between legs and body, giving it a much more substantial appearance than No. 1. The legs are triangular in section and are scored on the interior faces with wide trenches. The prominent spout provides a visual counterweight to the heavy lower part but the posts seem too massive for their diminutive caps. Surface decoration in Style Va wraps around the body in two zones. The main register consists of a disintegrated *taotie* face; the only high relief features are the eyes, which are further distinguished by their lack of *leiwen*. Thin flanges frame the *taotie* on the sides and, on the face opposite the handle, form its snout. The upper register, just underneath the lip, is made up of rising triangular blades.

The vessel was cast in a single pour. Gettens says that the mold was in two pieces,¹ but he is evidently taking for granted the complex subunits within those pieces, or in addition to them, that formed the posts, the handle, and the underside and legs. A casting fault on the bowl's bottom suggests that casting may have been done upside-down. There is evidence of shrinkage at the joins between legs and body and posts and caps.

GH

¹ Pope 1967, p. 148.

No. 4. *Jue* (54.15)

Height 23.2 cm

Width 18.7 cm

Weight 960 g

Inscription of four characters

Pope 1967, no. 24

This vessel has three legs supporting a round-bottomed body. A large spout on the front is balanced by a pointed tail at the back. To either side of the base of the spout are large posts with half-oval cross section and tall caps. The one band of decoration is interrupted by the handle, which is above one leg, and by three flanges. The band contains two *taotie*, one bisected by the handle, the other by the flange opposite the handle. The *taotie*, in relief that varies considerably in height, leave room for only very small areas of *leiwen* ground. Next to the flanges between *taotie*, small dragons face downwards. Above this band are several triangular areas of decoration. A long triangle under the tail and the still longer one under the spout consist of cicadas facing downward set against a ground of *leiwen*. In the

smaller triangles a shape something like an elaborate letter 'A' is set against a background of fine lines. The caps on the posts have a narrow band of *leiwen*. The handle is a plain strap with a small head at the top. Mold marks are readily apparent on the underside of the caps. An ancient repair is visible at the base of the spout. The surface is green.

An inscription of four graphs under the handle reads *Zuo Fu Xin X* "Made for Father Xin X" where X is a *yaxing* framing a graph whose reading is uncertain.

MGU

No. 5. *Jiao* (53.83)

Height 22.5 cm

Width 15.5 cm

Weight 1.22 kg

Inscription of 16 characters in body and lid

Pope 1967, no. 26

Its symmetrical form and almond-shaped mouth distinguish this rare vessel type from the far more common *jue*, which has a pointed tip on one end and a pouring spout on the other. This particular *jiao* owes its beauty to its strikingly flared upper body, which, when compounded with the slightly concave shape of its lid, the eyes that stare out from the *taotie* in the upper register, and the flared, tense legs, gives the impression of an alert animal ready to charge the viewer head-on. Deep bold spirals of varying width cover the lid and the body of the vessel. Short flanges notched alternately with straight and L-shaped lines protrude from the main register of the vessel, dividing it into quarters. In this register the *taotie* patterns are diffuse and hard to read; the *taotie* higher up are more conspicuous, their eyes in high relief. On one side the flange is replaced by a small strap handle, upon which rests a small bovine head; a slightly different head accents the top of the flange opposite the handle. A cicada fills the space on the vessel underneath the handle. On the lid of the vessel are two elongated *taotie*, one facing toward each tip.

The vessel and its handle appear to have been cast together in one pour in a piece mold whose principal joins lay along the vessel's major axis. One of the legs shows a shrinkage depression, not in the usual place where the leg joins the body but part way down its outer face. The handle is channelled and filled with reddish core residue. It is not clear whether the lid was cast in one pour with its arched handle. X-rays show that two of the legs are affixed with solder, apparently modern repairs. The solder join is well concealed with paint which closely imitates the colour and texture of blue and

green copper corrosion products. The paint contains ground malachite and synthetic ultramarine.¹

Unlike most bronze vessels of the Anyang period, this *jiao* bears a lengthy inscription. The

丙申，王易（賜）A 亞 B 奚貝，
才（在）C，用乍（作）父癸彝。

sixteen characters have been transcribed into modern Chinese as follows:²

- A The fifth character is equated by Ma Chengyuan with the modern character *fu* 服.³ The combination *fu ya* 服亞 most likely was an official title. Shang oracle-bone inscriptions use each of these characters separately as official titles.
- B This character combines the graph for “tiger” with the mouth radical (four times repeated, at the four corners of the tiger’s head). Presumably it represents a family name here, the name of the maker of the Freer *jiao*.
- 奚 The character *xi* is probably a place name. It appears five times in the known corpus of Anyang oracle inscriptions.⁴ In one case it follows the character *zai* “at” and in three cases it follows the character *tian* “to hunt,” both contexts showing it functioning as a place name. Here it modifies cowries, specifying their source.
- C The context implies that this very complicated character is another place name.

The inscription might thus be translated as follows: “On the day *bingshen* [the 33rd day of the cycle] the king awarded the *fu ya* officer B cowries from Xi at C. B therefore made for Father Gui this precious vessel.”

Several features of this inscription point to a date near the end of the Anyang period (i.e. 11th century BC): its unusual length; the appearance in it of the stem *gui* in its Period V form, known in oracle-bone inscriptions only from the reigns of the last two Anyang kings; and the handwriting, which exactly matches that of the inscription on a *jia* in the St. Louis Art Museum, an inscription that uses a dating formula specific to Period V oracle inscriptions.⁵ Its decoration,

which has the even density of Style III but much looser draftsmanship than early examples of that style (compare the *fang yi* No. 30), should probably be regarded as a late Anyang survival or derivative of Style III.

DMF

¹ Pope 1967, pp. 152–3.

²Ma 1988, p. 10. I substitute capital letters for the characters in Ma’s transcription that do not occur in modern Chinese.

³*Loc. cit.*

⁴Shima 1971, p. 469.

⁵Bagley 1987, p. 525.

Body

Lid

No. 6. *Jia* (23.1)

Height 53.0 cm

Weight 7.60 kg

Inscription of one character

Pope 1967, no. 20; Lodge 1946, pl. 4

Dominated by its two large capped posts, this round-bottomed vessel with strap handle sits on three large tapering legs, splayed slightly outward. The body has two distinct horizontal parts separated by slight shoulder, the lower part straight-walled and the upper part flaring outward to a molded rim. The flanges are interrupted at the shoulder. Aligned with the legs or set midway between two legs, they divide the circumference into sixths (above one leg is a strap handle rather than a flange). The flanges midway between legs bisect Style IV *taotie* designs. Above the two registers with *taotie* are eleven triangular blades rising toward the rim of the vessel. On the legs the outer triangular faces bear adaptations of *taotie*; the inner faces have knife-shaped depressions their full length. The bell-shaped caps sitting on square posts have a band of round *leiwén* at the base, four triangular blades resting on it, and three bowstring lines above; on the top of each cap is a sunken-line whorl pattern.

The inscription of a single graph, the stem character *wu*, is located inside the vessel, on the bottom.

The vessel was cast in a three-piece mold removed from the model in six pieces; mold marks run inside all six openwork flanges, but continue onto the vessel above only three. Mold marks continuous from the handle to the vessel show handle and vessel were cast in the same pour. The legs are cast around cores invisible from inside the vessel and originally invisible from outside, as well; one leg's core is exposed where the tip of the leg has broken off. The generally olive green tin oxide patina is interrupted by eruptions of malachite, azurite, and cuprite.

Originally developed to fill horizontal rectangular decorative bands on vessels in the Erligang period, the *taotie* motif has here been adapted by the Anyang caster to fill geometrically regular spaces of greatly varying proportions. The vessel provides a number of interesting examples of the caster's inventiveness. In the two main registers, the available spaces were rectangular, and accommodating the *taotie* to them was routine. To fit the long tapering legs, by contrast, the *taotie* motif had to be changed almost beyond recognition—its horns stretched upward, body omitted, and jaws drawn downward all the way to the tip of the leg.¹ Other motifs were treated with the same flexibility. The rising blades above the two main registers contain not *taotie* with elongated jaws but analogous configurations made from paired dragons. Similar but smaller triangular areas on the post caps are occupied by a simpler hooked-line motif.

The vessel probably dates from a little before 1200 BC. A *jia* found in Fu Hao's tomb has a nearly identical decorative scheme executed in Style V rather than Style IV, otherwise differing significantly only in the presence of an animal head on the handle (Fig. 6.1).²

PJL

¹ Compare the *taotie* on the lid of No. 5, where again the spaces to be filled were triangular.

² Zheng 1994, p. 31; Beijing 1997b, p.40.

Fig. 6.1 *Jia* from the tomb of Fu Hao. Height 65.7 cm. After Beijing 1997b, p. 40.

No. 7. *Jia* (07.37)

Height 41.9 cm

Weight 3.69 kg

Not inscribed

Pope 1967, no. 21

The posts that rise from the slightly flared mouth of this *jia* are topped with crested birds in place of the usual caps (see e.g. *jia* No. 6). With their sharp beaks, hooked crests and intricate feathers, the birds and their posts account for a third of the vessel's height. The body of the vessel has two bands of decoration, each occupied by three *taotie* and divided into six compartments by five hooked flanges and the handle. The lumpy buffalo head on the handle, found more often on the shoulders of *pou* and *zun* vessel types, has horns and eyes rising in high relief above a surface otherwise uniformly covered with sunken lines. Curiously, a segmented flange runs down the middle of the head as if imitating the flanges that bisect the *taotie* on the vessel proper. The *taotie* in these lackluster Style III bands can scarcely compete for attention with the handle and birds. Only their eyes and horns are given any prominence, everything else being barely distinguishable from the mesh of *leiwen*. While these designs belong technically to Style III, they were probably made by casters who had knowledge of Styles IV and V.¹ In each compartment, a round boss is found at the corner diagonally across from the *taotie*'s eye. These bosses are not eyes, as the surrounding lines do not suggest the existence of a creature; they were probably added in the hope of enlivening dull expanses of featureless spirals.² Additional bosses adjacent to the handle are flat.

The curvature of the flared mouth is countered by the outward splay of the three long legs. Each leg has a roughly triangular cross section with nearly straight outer faces and curved inner surfaces that taper smoothly to the pointed tips. Facing the handle, the leg to the right and the one directly below were cast

together with the vessel. Triangular openings inside the vessel on the bottom expose the leg cores. The leg to the left, as Gettens' X-ray revealed, contains a metal core and was probably added as an ancient repair of a casting fault.³ The right leg also has a solid tip cast-on to repair damage or, more likely, a casting defect.

On the two flanges above the legs, mold marks continue from the flanges onto the vessel, indicating that these two flanges were cast together with the vessel in a three-piece mold. The remaining three flanges were precast. Locations corresponding to them on the inside wall are thickened into bumps, no doubt so that the precast parts would not penetrate the wall.⁴ The handle by contrast was cast onto the vessel, locking through openings in the wall and exposing on the interior two decorated metal bosses at the upper end of the handle and a roughly rectangular area of metal overflow at the lower end.⁵

The solid posts that the birds rest on were cast in one piece with the vessel, and the birds were cast separately and then attached. The ends of the posts appear to be thin rectangular plates on top of which the birds were set. It is not clear exactly how the two components were joined, but a seam around the flat bottom of each bird hints at the use of hard solder.⁶ Gettens suggests that the posts might have been pouring gates for the metal before the birds were set in place; his X-ray study shows domed tips atop the posts, which project into the birds.⁷

The most unusual feature of this *jia* vessel is the birds on the posts; their lively depiction marks this vessel as a southern casting. While bird motifs are common among Shang bronzes, there appears to be a fundamental difference in their

execution that speaks of their place of manufacture. Bagley classifies the use of birds into the following four categories by their functions: finials, shoulder decorations, decoration at top of the flange, and flanges, not to mention their use as two-dimensional surface decorations.⁸ It appears that birds in the earliest examples served as finials before they were incorporated into two-dimensional surface decoration.

In the northern regions of China around the Yellow River, birds are stiff and unnatural; their oversized beaks and large ears give them a rather clumsy appearance. The knob of *fang jia* No. 8 can probably be taken as characteristic of northern casting. Another example of a northern bird is a *fang zun* from Fu Hao's tomb, which has four birds at its corners and the more common bullhead at the center of each side.⁹ At Anyang, bird motifs are also found as two-dimensional surface decorations that occupy registers similar to those occupied by dragons. These two-dimensional bird motifs tend to be rather unnatural, the curves of their wings and feathers very simple and schematic. The rectangular *fang yi* from Fu Hao's tomb is a good example.¹⁰

In the southern regions of China around the Yangzi River, however, bird motifs attracted greater attention, and their applications were much wider. Not only are they found sitting on the shoulders of various vessels and on top of flanges, sometimes they even replace the flanges.¹¹ The bird posts of the Freer *jia* connect it firmly with the Yangzi region.¹² Bird motifs in the south were designed with close attention paid to real animals. In many cases, they take on lively shapes and are lavishly decorated with fancy crests. Sharp beaks and feather-like patterns help make them more naturalistic and less stylized.

The bird motifs not only suggest cultural and religious differences between the people of Anyang and those of the middle Yangzi region, they also suggest differences between other local cultures. The bird motifs found among the Sanxingdui bronzes, for instance, are mostly eagles and cocks.¹³ In comparison to those of the middle Yangzi region, Sanxingdui casters seem

to have devoted even more attention to rendering faithfully the details of real animals.

The frequent use of bird motifs is part of the southern caster's preoccupation with naturalistic motifs.¹⁴ Bronzes from a tomb at Xin'gan in Jiangxi province, for example, have rams or tigers as finials atop handles.¹⁵ A peculiar bronze tiger with a bird riding on it has also come from the Xin'gan tomb.¹⁶ These naturalistic motifs clearly attest to cultural differences between north and south.

DTL

¹ The fact that the outline of the *taotie* is emphasized by slightly wider lines and that the horns are executed in high relief suggests the caster was under the influence of Style IV and V designs. While *leiyen* fills the *taotie* as well as the ground, the kind of devotedly carved intricate details that we see in early Style III décor is lacking.

² Examples of such additional bosses are found on other Style III *jia* vessels; for example, a *jia* excavated in 1936 from M188 at Anyang (Beijing 1997b, pl. 38) and a *jia* at the St. Louis Art Museum (Owyoung 1997, no. 2).

³ Pope 1967, pp. 130–31.

⁴ See No. 26 for discussion of precast flanges.

⁵ Bosses and metal overflow in the interior of the vessel are evidence of casting on through openings. This technique was typical of pre-Anyang casting; for example, compare with a *gui* from Panlongcheng (Bagley 1987, fig. 214) for similar handle attachment. Casting on through wall openings gives a mechanical interlock between the handle and vessel body, which is more reliable than metal fusion (not easy to achieve in copper alloys). The rectangular overflow at the lower end of the handle is rare. Usually, only the upper end of the handle is cast through openings, perhaps because the strain on the lower end was less. By the time of Anyang, as typified by the tomb of Fu Hao, handles were more often cast on over tenons (see Bagley 1987, p. 43).

⁶ While the seam suggests strongly the use of hard solder, the evidence of hard solder use in

ancient China is scarce. Gettens does not discuss specifically how the birds were joined on in Pope 1967, p. 131. Refer to Bagley 1987, p. 43 for a discussion of joining techniques.

⁷ Pope 1967, p. 131. For illustrations of the domed tips, see Gettens 1969, p. 163, figs. 211-12.

⁸ Bagley 1987, pp. 546-8.

⁹ Zheng 1994, pl. 26.

¹⁰ Beijing 1997b, pls. 60-62.

¹¹ For examples of birds replacing conventional

flanges, see No. 34; see also Bagley 1987, no. 104.

¹² A very similar *jia* unearthed in the Wei River valley is regarded by Bagley and Rawson as a southern casting imported into Zhou territory (Bagley 1987, fig. 104.12; Rawson 1990, pp. 48-9).

¹³ See Beijing 1994, pls. 42-4, 46-51; also Chen 1994, pls. 41, 43 and 51.

¹⁴ Also refer to the discussion of No. 37.

¹⁵ Peng 1994, pls. 34-5.

¹⁶ Peng 1994, pl. 38.

No. 8. *Fang jia* (35.12)

Height 41 cm

Width 25 cm

Weight 9.1 kg

Inscription of one character

Pope 1967, no. 22; Lodge 1946, pls. 1-2

This imposing *jia* consists of a rectangular body supported at its corners by thick legs of triangular section. The outer edges of the legs are almost straight, but their inner faces are strongly curved, so that they seem splayed outward under the weight of the body. The S-curved body carries two large capped posts and is covered by a flat lid with a handle in the shape of a small bird. Thin notched flanges project beyond the lip, bisecting the sides and accenting the vessel's curvature at the corners, where they extend downward along the legs. Three sides of the body prominently display disjointed Style Va *taotie*; on the fourth side the same *taotie* is overshadowed by a bulky handle that replaces the *taotie*'s central flange. Set against a ground of fine angular *leiwen*, these *taotie* stand out in medium relief and are themselves textured with circular *leiwen* patterns. On the front and back—the longer sides of the rectangular body—the lower corners of the main register are occupied by upright birds sheltering beneath the *taotie*'s tails. Above the main register, bird-headed dragons oppose each other, two on each of the sides and four on the front and back. The uppermost register consists of downward-facing cicadas perched on rising triangular blades.

Decoration on the legs and lid is similar to that on the body. The craftsman exploited the blade-shape of the legs to cast elongated Style Va dragons which oppose each other symmetrically across a thin central flange. Two large *taotie* adorn the lid facing outward toward the front and rear faces. The posts and caps usual on *jia* have here grown to extravagant proportions. The caps, with flanges of their own, are particularly striking, their wasp-waisted sides rising to tent-shaped tops. Their surface decoration is in lower relief than that on the body and legs, consisting of simple engraved patterns.

The vessel body was cast in one pour along with the legs, posts, and possibly the handle too. Puzzlingly, although Gettens finds no evidence of a join between the handle and the vessel body, the surface decoration on the vessel does not avoid the ends of the handle but vanishes beneath them. It seems improbable that the caster who painstakingly executed this vessel's exceptionally fine decoration was guilty of some sort of miscalculation here; he must have consciously decided that in size and spacing the motifs on the back of the vessel should exactly match those on the front. Less unusual are the primary mold divisions, which occur along the flanges, and there is evidence also of a horizontal division at the juncture of body and legs. As is common with cored legs, holes midway up the interior faces indicate that clay spacers separated the leg cores from the outer part of the mold. While the bottom halves of the posts were cast in one piece with the vessel proper, mold marks visible at the midpoint of each post show that the caps were made separately and attached by further pours of metal; both posts and caps are cored. The lid's bird-shaped handle is cast-on, secured through two holes in the lid.

The inscription, which appears inside the vessel on the bottom, is an emblem that shows two kneeling figures reaching toward a ritual vessel and, below them, a pronged rectangle of uncertain meaning. The combination, which occurs on many bronzes, is discussed by Bagley in connection with a *fang ding* in the Sackler Collections on which it appears.¹

GH

¹ Bagley 1987, no. 88

No. 9. *Gu* (40.3)

Height 28.6 cm

Weight 940 g

Inscription of four characters

Pope 1967, no. 8, Lodge 1946, pl. 10

Retiring in character, this *gu* consists of a molded foot, a faintly swelling midsection, and a flared upper part decorated with rising blades. It is quartered along planes of symmetry by low thin vertical flanges in two of its three decorated zones. The middle section carries two dismembered *taotie*, more expansive versions of which fill the lower of two bands on the foot. Four cicadas fill the narrow upper band on the foot. In the upper zone the blades rise from an equally narrow band that contains snakes instead of cicadas. The undecorated zone between foot and midsection contains two bowstring lines and a pair of cross-shaped perforations. All the decoration is executed in Style Va: the raised motifs are covered with rounded *leiwen* and set against a ground of rectangular *leiwen* so finely executed as to confront us with a technical problem: how such fine lines were carved and cast is a mystery.

The vessel was cast in a two-piece mold that was removed from the model in four pieces. The bottom has a spacer of differently colored metal. Mostly covered by a tin oxide patina, the vessel also has a few patches of malachite and cuprite.

Inside the foot is a cast inscription of the two characters *zhong* “middle” and *de* “virtue,” the combination serving here perhaps as a name.¹ At least two other vessels bear the same inscription written very similarly, a *gu* in the Brundage collection (Fig. 9.4)² and a *fang lei* in the Hakutsuru Art Museum, Kobe (Fig. 9.3).³ Matched in decoration as well as in inscription, these three vessels were probably made as a set.

Style Va decoration is characterized by *leiwen* covering both the ground and the relief features. *Taotie* done in this style are invariably rendered in disconnected parts, each part about the width of

a single *leiwen* spiral. Other Style Va motifs, such as dragons, serpents and birds, are usually connected units, but still drawn so that their greatest width is about that of a *leiwen* spiral. Derived from the high-relief variant of Style III,⁴ Style Va ranges between two extremes of design. At one extreme, *leiwen* on the motifs has the same density as the *leiwen* ground, differing, if at all, in shape (round vs. angular) or depth; *gu* No. 9 supplies a good example, with round *leiwen* on the motifs and equally-sized angular *leiwen* as the ground (Fig. 9.2). Further examples include *jue* No. 3, *fang jia* No. 8, *gu* Nos. 10 and 11, *fang yi* No. 32, *guang* No. 36 and *yu* No. 43. At the other extreme, the motifs are decorated with spiraling sunken lines that are noticeably bolder and less dense than the *leiwen* of the ground, increasing the image-ground contrast. Examples are *zun* No. 14 (Fig. 9.1) and a *fang yi* in the Metropolitan Museum.⁵

The first securely dated examples of Style Va come from Fu Hao's tomb, which belongs to the reign of Wu Ding, c. 1200 BC. However, none of the nearly one hundred *gu* and *jue* in her tomb are decorated in Style Va, though it later became the most common decoration on these two vessel types. Evidently the Anyang caster in Fu Hao's day had not appreciated the special suitability of muted decoration to these comparatively small vessels.⁶ All four of the Style Va *gu* in the Freer collection must have been made after her time, the present one probably in the 12th century BC.

PJL

¹ Lodge 1946, p. 29.

² Asian Art Museum of San Francisco B60 B777
(d'Argencé 1977, pp. 56-7 and 139).

³ Umehara 1959, pl. 16.

⁴ See Bagley 1987, p. 268-75.

⁵ Bagley 1987, no. 78.

⁶ Bagley 1987, p. 250.

Fig. 9.1. *Zun* No. 14, detail.

Fig. 9.2. *Gu* No. 9, detail.

Fig. 9.3. *Fang lei*. Height 42.4 cm. Hakutsuru Art Museum, Kobe, Japan.

Fig. 9.4. *Gu*. Height 28.6 cm. Brundage Collection, Asian Art Museum of San Francisco.

No. 10. *Gu* (51.18)

Height 33.0 cm

Weight 1.5 kg

Inscription of four characters

Pope 1967, no. 10

This vessel owes its forceful architectural character to the sweep of its silhouette, dramatized by vertical flanges, and also to such finely adjusted details as the molded rim and foot. The flanges, which quarter the vessel and overshoot both lip and base, are interrupted by three gaps. These gaps, sometimes reinforced by blank areas of the surface at the same heights, separate the decoration into four zones. Both the high-relief decorative patterns and the ground are covered by a deeply carved *leiwen*, damping the visual contrast between the two; only the eyes of the patterns have no *leiwen*, and they stand out accordingly. The straight-walled middle zone contains two dismembered *taotie*. On the foot are slightly fuller versions of the *taotie* and, just above them, a narrow band containing paired dragons with C-shaped horns confronted across a flange. A similar narrow band of serpents supplies a base on which stand the four blades that extend to the mouth of the vessel, but they are decisively set apart from their base by a gap in the flanges. Each blade contains an upside-down *taotie* with nothing but eyes and eyebrows between its drastically elongated mouth and horns. The lip is molded and resembles a building cornice supported by the four flanges. The zone between foot and midsection is blank except for bowstring lines and cross-shaped indentations at front and back, one of which has corroded through the wall of the vessel.

The vessel was cast in a two-piece mold, but there are clear signs that the mold was removed from the model in four pieces which were then rejoined in pairs, allowing two of the four mold joins to be carefully retouched (retouching that prevented mold marks on two of the join lines can be seen on the vessel wall, just above two of

the smallest flanges). A spacer is visible in the recessed bottom. The vessel is covered with a tin oxide patina. Patches of malachite and azurite are visible on the inside.

The inscription on the inside wall of the foot is the single graph *xi* “to move house, to shift.”¹ It takes the form of two right angles and two feet, here beautifully executed (and looking as though executed by stamping on soft clay).

This vessel and *gu* No. 9, both adorned with Style Va decoration and both from the late Anyang period, represent distinctly different achievements of Anyang bronze design (Fig. 10.2). With a thinner lip, lower foot rim, curving middle section, and unobtrusive flanges confined to the lower half the vessel, *gu* No. 9 presents a rather unassuming profile. The viewer of No. 10, on the other hand, is struck first by the silhouette and the architectural effect. The larger and deeper *leiwen* on No. 10 is not as fine as that on *gu* No. 9, and it was surely not meant to be: the surface motifs here must compete with the flanges for visual attention, and had the caster covered them with patterns too minute, they might simply have disappeared.

The carefully molded rim and foot and the overshoot flanges are characteristic of the latter half of the Anyang period, though they are encountered far less often on *gu* than on other, larger vessel shapes. Fu Hao's tomb (c. 1200 BC) yielded several Style IV *gu* with slightly overshoot flanges; they clearly represent a stage of stylistic development earlier than No. 10.² The closest relative to the present *gu*, excavated in 1979 from Anyang tomb M2508, is nearly identical but for tripartite flanges.³ Vessels with more extravagant flanges are best known from a tomb discovered at Anyang in 1990, Guojiazhuang M160, which the

excavators assign to the third Anyang stage (Fig. 10.1).⁴ The M160 *fang gu* is wildly exaggerated by comparison with the Freer *gu* and must be later. No. 10 might therefore be assigned to the 12th century BC.

PJL

¹ Exactly the character seen here and several related ones appear in oracle inscriptions. See Shima 1971, p. 318.

² Beijing 1984, black and white plates 44-5; Zheng 1994, p. 28.

³ According to *Yinxu qingtongqi*, the excavation report for M2508 has not appeared; the authors date the M2508 *gu* to the third of four stages of the Anyang site (Beijing 1985, p. 65).

⁴ *Kaogu* 1991.5, pp. 390-91; the bronzes are very well illustrated in Beijing 1997a.

Fig. 10.1. *Fang gu* from Guojiazhuang M160. Height 30.3 cm. After Beijing 1997a, p.62.

Fig. 10.2. *Gu* No. 9 and No. 10.

No. 11. *Gu* (43.9)

Height 29.0 cm

Weight 1.30 kg

Inscription of two characters

Pope 1967, no. 9

This tall slender wine cup is circular in cross section, narrow at the waist but flaring out to a molded foot and a wide mouth horizontal at the rim. The decoration falls into three zones distinctly separated by gaps in the scored flanges and by areas bare of decoration. In the decorated zones, both background and relief elements are covered by fine *leiwen*. The middle zone contains two Style Va *taotie*. The lower zone, as on the *gu* No. 9, actually contains two registers, a horizontal strip of cicadas at the top and a pair of large *taotie* spreading towards the foot below, but the separation between the two registers is disguised by continuous flanges that overshoot the lower edge of the decoration. The upper zone likewise has two component registers with no space between them, a set of four tall blades and a small band of serpents on which the blades stand. Upside down within each blade is an elongated Style Va *taotie*. Between the middle and lower zones is a plain band divided into thirds by raised lines and adorned with two indented cross shapes. In other *gu* vessels, though not here, such crosses often go completely through the vessel wall.

The vessel's bottom is located just above the crosses. Embedded in it is a spacer that has retained a shiny bronze color. Underneath the bottom are four vertical ribs of unknown purpose. The vessel appears to have been cast in a two-piece section mold, judging by traces of mold marks on the flanges, though the mold must have been removed from the model in four sections that were then rejoined in pairs. The outside of the vessel is mostly covered by a green patina, but the underside shows traces of red and the inscription as well as much of the *leiwen* is filled with red corrosion. The inside of the vessel is mainly a silver-gray.

The inscription consists of two graphs, one a drawing of a chariot, the other a graph composed of two feet on opposite sides of a stream. The latter occurs in oracle inscriptions and is normally equated with the modern character *she* "to ford a stream."¹ The inscription in the Freer *yu* No. 43 includes another drawing of a chariot. Features common to the two drawings include a carriage box, wheels, axle, shaft, crosspiece, and yokes.² The chariot graph on this *gu* includes in addition linch-pins by the wheels and yokes for four rather than two horses as in *yu* No. 43. There is little evidence besides this four-yoked chariot character to indicate that Shang chariots were ever pulled by more than two horses. Excavated Shang chariot burials seem to have contained only two-horse chariots.³ Of all chariot inscriptions recorded in Chen Mengjia's survey of American bronze collections, this is the only one depicting four yokes.⁴

CFH

¹ Shima 1971, p. 63.

² Pope 1967, p. 67.

³ For a description of Anyang chariot burials see Bagley 1999, pp. 202-8.

⁴ Chen 1977, vol. 1, p. 204.

No. 12. *Gu* fragment (17.202)

Height 14.6 cm
Weight 310 g
Not inscribed
Pope 1967, no. 11

Poorly preserved and missing its foot and mouth, this *gu* fragment is a shadow of its former self. Unlike the motifs on the previous *gu*, its high-relief parts are not covered with *leiven* like that which surrounds them but merely scored with single sunken lines. The vertical-walled mid-section is quartered by four flanges and carries two disjointed *taotie*. Below it is a zone with bowstring lines but without the cross-shaped indentations usually present on *gu*. Above the mid-section about a third of the vessel's upper part survives, showing a band of snakes (as on Nos. 9–11) and the lower ends of four blades. Spacers are visible inside the bottom of the vessel and in the thin blank strip just above the midsection.

The decoration on this *gu* is no doubt derived from Style Va, but it aims at stronger impact; indeed it would amount to ordinary Style V if its *taotie* were not still formed of unconnected parts. This relatively scarce form of decoration probably belongs to the 12th or 11th century BC. Only a small number of vessels from the late Anyang period have similar decoration; among them are:

1. A *gu* formerly in the Vannotti collection, a close enough match to give an idea of what *gu* No. 12 once looked like, though differences of detail are sufficient to indicate that they were not made as a matched pair (Fig. 12.1).¹

2. A *zun* in the Hubei Provincial Museum, found in 1965 at Hubei Hanyang.²

3. The *Ya Choufang zun* in the National Palace Museum, Taipei.³

PJL

¹ The only obvious differences are a slight bulge in the midsection, cross-shaped indentations, and the absence of a sunken line in the eyebrows of the *taotie* (Brinker 1975, no. 41; Eskenazi auction catalogue, 13 June–7 July 1989).

² Tregear 1994, p. 38–9; Tokyo 1989, p. 21; Beijing 1972, p. 44.

³ Bagley 1987, fig. 47.2.

Fig. 12.1. *Gu*. Height 30.1 cm. After Eskenazi auction catalogue, 13 June-7 July 1989, no. 4.

Gu No. 12, to the same scale as Fig. 12.1.

No. 13. *Gu* (11.51)

Height 26.6 cm

Width 15.0 cm

Weight 1.05 kg

Not inscribed

Pope 1967, no. 7

In shape this vessel resembles a cylinder flared at both ends, but with a wider mouth than foot, the foot with a slightly overshot high molding. It has two bands of decoration. The upper band, which bulges slightly, is just under halfway up the vessel. Two rounded vertical ridges, one on each side, give the decoration a central focus and extend through the borders of raised circles. An eye can be found on either side of each ridge but the animal or animals owning the eyes are not clearly defined, and this decoration, descended from Style III, reads mainly as massed spirals. The decoration in the lower band, which lacks the pair of ridges, is similar; vestiges of dragons facing downwards can be detected in the spirals. Above the lower band is one bowstring line, above the higher are two. Unusually, the vessel does not have cross-shaped holes or marks in the wall between the two bands. It does have three triangular projections inside the foot slanting upwards toward the bottom.

The surface is in poor condition. Attempts at removing corrosion seem to have given it an almost sanded look.¹ The color is mostly dark green and brown.

MGU

¹ See entry No. 32 for a discussion of traditional surface treatments.

No. 14. Shouldered *Zun* (51.19)

Height 36.8 cm

Weight 13.15 kg

Inscription of two characters

Pope 1967, no. 16

This vessel has three main parts, a conical foot, a bulging middle section, and a mouth flaring widely to a thick molded lip. Six vertical flanges partition all the decorated areas except the mouth, where they stop short of the triangular blades that rise toward the rim, and the shoulder, where animal heads replace three of the six flanges (Fig. 14.1). On the middle section, broad-tailed birds fill a narrow register above a dismembered *taotie*. Both the *taotie* on the middle section and an abbreviated version on the foot are flanked by downward-facing dragons and bisected by a flange. The animal heads on the shoulder are on axis with the bisecting flanges. Their snouts project beyond the shoulder; their rams' horns have two levels of decoration and spiral up to pointed tips. On either side of each head the shoulder carries a crested dragon with limbless, contorted S-shaped body. The register above the shoulder is occupied by lazy reclining dragons with hooked beaks and crests.

Though probably cast in a mold with six vertical divisions, the vessel is highly finished and mold marks are difficult to find.¹ Three rectangular holes at the top of the foot are aligned with the flanges between *taotie*. The three animal heads on the shoulder were cast separately from the vessel; radiographs show bosses beneath them projecting from the vessel, but the method of attachment is not clear.² Cuprite and a little botryoidal malachite are the principal corrosion products, and a fabric pattern can be seen on the patina inside the mouth.

The inscription, on the bottom inside the vessel, consists of the graph *zi* "son" or "prince"

and a larger, more pictorial graph composed of two hands holding a dragon. The second graph, sometimes read *gong*, appears in oracle inscriptions as a proper name.³ The combination *zi gong* occurs on a few other bronzes, including a large *ding* in the Royal Ontario Museum which, to judge by its shape and decoration, is a borderline late Anyang or early Zhou casting, distinctly later than the Freer *zun*.⁴ The S-shaped dragon in the Freer *zun*'s inscription bears a strong resemblance to the dragons on its shoulder, suggesting that ancient Chinese had a word for the motif; no similar evidence exists for the frontal face, sometimes with two bodies, that we call *taotie*. A shouldered *zun* from Fu Hao's tomb is similar enough to the Freer vessel, though in much poorer condition, to make a date around 1200 BC likely for it (Fig. 14.2).⁵

The name *zun* is commonly applied to vessels of several unrelated types. The earliest is the shouldered *zun*, represented by this vessel and characterized by a broad shoulder, often with animal heads. Originating during the Erligang period, the type was common through the first half of the Anyang occupation. A square derivative, the shouldered *fang zun*, appeared in the early Anyang period. The first examples come from the tomb of Fu Hao, the most extravagant a few generations later from Guojiazhuang M160.⁶ During the latter half of the Anyang period, another type appeared, the cylindrical *zun* (see *zun* Nos. 16–19); this often has the same general shape and decorative scheme as *gu* vessels but is larger and stouter. Yet one more use of the name *zun* is as the general term for bronzes in animal shape—

anything from the parrots in Fu Hao's tomb⁷ to the Freer's elephant *zun* No. 39. All three uses of the word are modern conventions; in bronze inscriptions the word functions as a more general term for vessels.

PJL

¹ See Pope 1967, pp. 100-101.

² Pope 1967, p. 102.

³ Shima 1971, p. 241.

⁴ White 1956, pp. 147, 150-51.

⁵ Zheng 1994, pl. 24; Beijing 1997b, p. 96.

⁶ An Anyang tomb excavated in 1979 and dated by its excavators to the third of four subdivisions of the Anyang occupation (i.e. Yinxu 3).

⁷ Beijing 1984, color plate 7 and nos. 784, 785; also illustrated in Zheng 1994, pp. 22-3 and Guggenheim 1998, no. 24.

Fig. 14.1. Animal head on the shoulder of *zun* No. 14.

Fig. 14.2. Shouldered *zun* from the tomb of Fu Hao. Height 46.7 cm. After Beijing 1997b, p. 96.

No. 15. *Fang zun* (25.2)

Height 35.3 cm

Width 27.6 cm

Weight 7.40 kg

Not inscribed

Pope 1967, no. 17; Lodge 1946, pl. 18

Above the wide, angular middle section of this *fang zun* sprouts an abruptly flared neck; below is a flared foot with a high molding. The middle section, topped with an oddly flat shelf adorned with animal heads, is wider at the top than at the bottom, creating trapezoidal fields for decoration; the foot is decorated in a similar but inverted trapezoid. Flanges run the height of the vessel at the corners and the center of each side, breaking at all the undecorated bands; except for the short flanges on the shelf, all have barbs at their midpoints.

On the upper section of the vessel flanges bisect decorated blades on the faces and corners. Each blade contains opposed, scaly, upside-down dragons whose bodies taper to fit the contours of the blade. Here as elsewhere on the vessel, only the eyes of the creatures protrude from the surface while all the rest of the decoration is discreetly flat (Style IV). The dragons are enmeshed in a swirling *leiwen* background. Below the blades, marked off by a thin horizontal line, is a narrow register in which pairs of beaked dragons face each other across the central flanges. Below this is a narrow register on the shoulder that contains plumed birds with long flowing tails.

In the central register the panels of decoration are bordered vertically by flanges and top and bottom by a sunken pattern copied from the flanges. These elements put a tight and conspicuous frame around the confronted birds in this register. The birds are sparsely decorated with unmodulated lines and stand out very boldly from the much denser *leiwen* ground. The decoration on the foot is again bordered by flanges and the flange pattern. Two gaping dragons, rearing in the confines of their allotted

space, face the central flange on each side. More intricately detailed than the birds in the register above, they stand out a little less distinctly from their *leiwen* ground.

The vessel is in good condition save for the chipped rim and some inscriptions in modern Chinese that are crudely incised on both the outer and inner surfaces. The patina is a dark green with patches of green malachite.¹ The animal heads were cast in a separate pour from the rest of the vessel (the patina is a different color) but Gettens was unable to discover how they were joined to the vessel.² Spacers just above the main register have corroded differently from the vessel.

The combination of relatively small size, stout proportions, flared and molded foot, nearly horizontal shoulder, and low-relief Style IV decoration dominated by confronted birds makes this vessel a distinctly unusual *fang zun*. For the shape and squat proportions a *fang zun* excavated from the tomb of Fu Hao offers a fairly close comparison, but the Fu Hao *fang zun* has a more widely flared upper part, eight prominent animals and animal heads on the shelf, Style V decoration, and a high, straight-sided, unmolded foot.³ A taller *fang zun* from the same tomb supplies a precedent for the alternating flanges and animal heads on the Freer *zun*'s shoulder, though the heads on the Fu Hao vessel are massive and have freestanding crests.⁴ However, it is only on significantly later *fang zun*, such as two from Guojiazhuang M160 at Anyang,⁵ that we find any parallel to the strongly curved foot of the Freer *zun*, and still without the Freer *zun*'s high molding. Moreover, these are large and extravagant Style V vessels next to which the Freer *zun* looks timid.

The most striking design element of the Freer *zun* is the Style IV birds of the central register. These are rather less similar to the birds (some of which are Style IV) on a few of the Fu Hao bronzes⁶ than to the birds on a *you* from Guojiazhuang M160.⁷ But while the birds on the Guojiazhuang *you* are similar in proportions and general outline (large wings with small tails below them), they are done in very high relief and have closed, hooked beaks and short crests.

Like the shape, the Freer *zun*'s birds seem to lack exact parallels elsewhere. Thus in the light of the comparative material so far supplied by archaeology, both the shape and decoration of the Freer *zun* are a baffling mixture of things, difficult either to place geographically or to date. The use of the flange pattern as a horizontal border might hint at a date near the end of the Anyang period (see the discussion of these borders in the entry for No. 19). Both the 1946 and 1967 Freer catalogues called it Zhou, but the birds on Zhou bronzes are not at all like those

here, and the very few known Zhou examples of the shouldered *fang zun* are utterly remote from the Freer vessel's shape.⁸ It may be a curious provincialism; it might conceivably be a modern forgery.

NRL

¹ Pope 1967, p. 107.

² Pope 1967, p. 107.

³ Bagley 1987, fig. 115; Beijing 1997b, p. 109.

⁴ Beijing 1997b, p. 110.

⁵ Beijing 1997 b, pp. 111–13. Guojiazhuang M160 is a tomb the excavators assign to the third of four stages they distinguish at the Anyang site (Fu Hao's tomb is assigned to the first of the four).

⁶ Beijing 1984, pp. 35–6, figs 23–4.

⁷ Beijing 1997b, pp. 121–2.

⁸ See e.g. Beijing 1996b, p. 147.

No. 16. *Zun* (55.1)

Height 25.3 cm

Width 20.6 cm

Weight 2.38 kg

Inscription of one character inside the foot

Pope 1967, no. 12

This stout vessel is of typical *zun* shape, with a widely flared mouth, swelling middle register, and flared foot. The foot is only sparsely decorated and the upper part not at all, leaving the vessel to be dominated by two large *taotie* that define the vessel's major axis. The *taotie* have prominent high-relief eyes, a bold nose, and jaws curiously attached to the eyes.¹ They are differentiated by their scarcity of intaglio decoration from the background of fine *leiwen* inlaid with pigment. The decoration in the main register is bounded above and below by a border of small circles. The foot is decorated by four pairs of bird-like creatures that face each other along the major and minor axes. These birds — or perhaps just eyes floating among gills — are drawn with deep intaglio lines of a kind that one would normally expect to find only on the high-relief areas of an Anyang bronze. Particularly interesting is the asymmetrical arrangement on the foot of the birds and the quills in between them, an asymmetry most noticeable in the pairs of birds at the minor axis. With the exception of the ridges bisecting the principal *taotie*, the bowstring lines, and the eyes, the decoration is entirely flush with the surface of the vessel.

The inscription, consisting of the single character *ge* “halberd,” was cast into the inside of the foot.

The vessel appears to have been cast in a two-piece mold. Vertical mold joins coincide with the minor axis, separating the two *taotie*. On the underside, where the recessed bottom joins the base, are four wedge-like brackets of unknown purpose often seen on ring-footed bronzes. Spacers do not appear to be present. The pale, powdery patina, which is mostly tin oxide, tests strongly for lead. The sunken parts of the design are filled with a black deposit made up mostly of the usual mix of carbonaceous material and quartz.²

DMF

¹Bagley (1987, no. 48) has given a list of *zun* with similar decoration of oddly drawn *taotie*.

² Pope 1967, p. 81.

No. 17. *Zun* (07.34)

Height 31 cm

Width 21.5 cm

Weight 2.38 kg

Inscription of one character

Pope 1967, no. 6

In shape this highly corroded vessel resembles but is more stout than the *gu* type. Above an unadorned foot molding are two registers of low-relief decoration, both of which consist of *taotie* faces—or opposing dragons meant to suggest complete *taotie*—in the upper register accented by subdued vertical ridges. The absence of *leiven* except at the fringes of the *taotie* pattern is atypical and perhaps indicates a late approximation of Style III decoration. Although the waxy green corrosion covering most of the vessel makes technical observations difficult, casting faults are evidenced by large blank areas in the decoration. A spacer is clearly visible in the vessel's bottom.

The inscription consists of the single graph *shi* “scribe.” This is known from the inscriptions of a number of bronzes not otherwise related in any obvious way to the Freer vessel.

GH

No. 18. *Zun* (78.29)

Height 29.2 cm

Not inscribed

Murray 1979, no. 6

This almost cylindrical vessel flares to a thick lip at the top. It bulges slightly for a band of decoration at the middle and then curves outward slightly to a high molded foot. The two bands of decoration have four plain flanges each. The bands are bordered horizontally by thin raised lines and another such line appears just above each band. The upper band contains two disjointed *taotie* in high relief, their features unembellished except for some lines and spirals sunk into them, their background entirely plain. The lower band of decoration contains bird-headed dragons similarly executed, their eyes in particularly high relief. Unlike many *zun* of this *gu*-like shape, this one has no openings in the smooth area between the two bands of decoration. The surface is mostly green.

The decoration on this vessel falls into the style Loehr labeled Vc. Style Vc is similar to Style Va (see for example the *fang jia* No. 8 and the discussion in entry No. 9), sharing the disjointed *taotie* typical of that style but lacking *leiwen* spirals on the ground and the raised parts. The *zhi* No. 28 also belongs to Style Vc but differs from the present *zun* in having no decoration at all on the raised elements, giving it an almost melted look.

MGU

No. 19. *Zun* (44.1)

Height 30.5 cm

Diameter 23.2 cm

Weight 4.39 kg

Inscription of three characters on the inside bottom

Pope 1967, no. 13

This subtly peculiar *zun* has a rather heavy appearance owed to its stout proportions, bulging midsection, and molded rim and foot. The two lower sections have thick, oppositely curved flanges. On axis with these flanges the upper section has instead curious triangular ridges.

The upper part of the vessel is decorated with four blades that rise from a narrow ribbon of fine *leiwen* spirals. Tapering toward the lip of the vessel, the blades are bisected by the triangular ridges. They contain nested scales and angular meanders drawn in unmodulated sunken lines sparse enough to make the upper part of the vessel seem only lightly decorated.

The lower registers have a weightier effect. The midsection and foot are virtually identical in decoration, the only difference being the middle section's horizontal borders of flange pattern (a pattern more complicated than the simple notches that appear on the actual flanges). In each of these two registers a compact *taotie* face fills the space between adjacent flanges. The faces, flanked by hooked vertical elements, are executed in a relief that varies in height, coming to a peak at the snout. The layout in which flanges separate but do not bisect the *taotie* is extremely unusual; it forced the designer to orient the tapering blades off the central axis of the *taotie*, with the odd result that as the viewer's eye moves upward from the *taotie*, the decoration of the vessel forks away to the left and right.

The vessel is finely cast, and mold marks were removed with considerable care, the only obvious ones being in the bands of *leiwen* and under the flanges. The patina is a gray-green tone with spots of whitish corrosion.

There is an inscription of three characters inside on the bottom. It consists of a clan sign and a dedication to Fu Ding "Father Ding." Exactly the same inscription appears on the *zhi* No. 29 (q.v.) and on eleven other vessels (among them the present *zun*) listed by Bagley, who suggests that all are Anyang castings made toward the end of the Anyang period.¹

The various peculiar features of No. 19 associate it with a large group of late Anyang bronzes discussed by Bagley.² Among these the closest match to the Freer *zun* is a *zun* in the Rietberg Museum in Zurich with similar triangular ridges, blade pattern, and horizontal flange-patterned borders in the middle register.³ The Rietberg vessel has two rather than four *taotie* in each register, however, and they are not only separated but also bisected by flanges.

At the earlier stage represented by Fu Hao's bronzes, the flange pattern which appears on the Freer *zun* as a horizontal border was popular in many contexts. Several *jia* from her tomb have the decoration on both horizontal and vertical edges of the legs,⁴ and it appears also, most peculiarly, on the otherwise undecorated foot moldings of several *gu*.⁵ This same pattern was used as a border to the diamondback dragons on some *pan*, including the Freer *pan* No. 41 and one from Fu Hao's tomb.⁶ It also appears in place of flanges on a few comparatively early *fang yi*, among them the Freer *fang yi* No. 31. As a horizontal border, however, it is very rare, and perhaps confined to the very end of the Anyang period; in this role it is seen on the Freer *zun*, the Rietberg *zun*, and two odd *gu*, all belonging to the group of late Anyang vessels mentioned above.⁷ The Freer *fang zun* No. 15, not

mentioned by Bagley, might also belong with this group.

NRL

¹ Bagley 1987, p. 303.

² Bagley 1987, entry no. 49.

³ Bagley 1987, fig. 49.1.

⁴ Beijing 1985, pl. 19 (M5: 752).

⁵ Beijing 1984, pls. 42-3.

⁶ Beijing 1985, pl. 23.

⁷ Bagley 1987, figs. 49.1, 49.27, and 49.29.

No. 20. *You* (74.31)

Height (including handle) 31 cm

Not inscribed

Murray 1979, no. 7

This vessel is shaped like an elongated pear set on a ring foot and supplied with a swing handle. The neck flares slightly to a thick lip on which sits the domed lid with its capped post. The swing handle terminates in snakeheads a short distance above the vessel's greatest diameter; beneath the heads is the mechanism that secures the handle to the vessel. The handle hugs the contours of the vessel but flares outward above the lip to form a loop high over the lid. Its outer surface is decorated with nested diamonds. A single band of Style III decoration encircles the narrowest point of the neck. One small ridge on each side bisects a *taotie*. Just above this band are two bowstring lines. The ring foot carries a band of spirals. The vessel surface is mostly green.

An area of corrosion covering much of one side of this vessel appears fabric-like. The vessel was probably wrapped in fabric at the time of burial. The corrosion has in most places completely taken the place of the material, but the Freer Technical Laboratory's report of its examination leaves open the possibility that some of the original fibers survive. It also notes that this fabric was a coarse tabby weave and might contain a selvedge edge.

Frequently bronze vessels bear corrosion that either preserves the shape of cloth they were wrapped in or preserves an impression of that cloth. As no significant fabric samples from the

Shang dynasty or before survive to modern times, this is our only evidence for the textiles of the time. A bronze *fang ding* in the Sackler Collections also has extensive fabric "impressions."¹ The *zun* No. 14 and several other vessels in this collection have smaller areas.

Vivi Sylwan has noted that these impressions indicate that Shang weavers were producing cloth from reeled silk, in other words the silk was unwound from the silkworm's cocoon in a continuous filament: on two of the bronzes she studied some of the impressions were caused by textiles made with untwisted silk, in some cases woven from single strands.² She also found several examples of silk twill woven almost identically to later examples from the Han dynasty. John Vollmer's research on bronzes in the Royal Ontario Museum has shown that non-silk textile impressions are also present on Shang bronzes, but he confirms that the Shang had a sophisticated silk industry.³

MGU

¹ Bagley 1987, no. 88.

² Sylwan 1937, pp. 119-26.

³ Vollmer 1974, pp. 170-74.

No. 21. *You* (42.14)

Height 24.2 cm

Length 21.5 cm

Weight 3.40 kg

Pope 1967, no. 47; Lodge 1946, pls. 11-12

This compact four-legged vessel is elliptical in cross section, its two planes of symmetry marked by small flanges. On each half, the caster has adapted the rounded belly and tapering neck to suggest the body of an owl whose legs are the legs of the vessel and whose head appears on the lid, its beak projecting beyond the rim. The owl's eyes and beak are bordered with rows of scales; beneath each eye is a curly element perhaps intended as an ear. The owl's C-shaped horns, which taper into higher relief at their pointed ends, are indistinguishable from those of a *taotie*. Prominent wings spiral out from the breast of each owl, their tips nearly touching the lugs for a rope-handle at the neck of the vessel; the lugs take the form of small animal heads. The outlines of the wing are marked with small circles, as are thin borders at the mouth of the vessel and the adjacent edge of the lid. Those regions of the vessel surface that correspond to the body of the owl are covered not simply with *leiwen* but with a pattern in which regular patches of *leiwen* alternate with smooth scales; evidently this pattern is meant to evoke feathers, and the contrast it makes with the undiluted *leiwen* elsewhere enables us to detect the faint hint of a tiny, downward-hooked tail plume that projects horizontally beyond the wing. Beneath the owls' wings a pair of small bottle-horned birds face each other across the flange, each with a large round eye and trailing plumage marked with chevrons; a similar pair of birds occurs above the wings, facing toward the handle lug.¹ On the outer face of each leg is a dragon whose tail curls around into its mouth. The center of the vessel's smooth underside features a coiled serpent with *taotie*-like face flanked by two *taotie* oriented in

opposite directions, all executed in sunken line (Fig. 21.5).²

The vessel is covered by a tin oxide patina, with malachite and a little azurite on the interior. The legs contain clay cores that are visible from underneath. Traces of core material can also be seen in the vertical perforations of the handle lugs. The lid was cast in a two-piece mold, though the roof-shaped knob handle and post may have been cast on.³ On the body of the vessel, mold marks are clearly apparent on the axes of the owl's breasts but only faintly detectable on the axes of the lugs. This suggests that the mold was removed from the model in four pieces (with an additional mold section for the underside), but that those four pieces were then rejoined in pairs to make a mold with only two vertical divisions. Moreover, on the axis where two mold sections were rejoined, the caster not only retouched the join but also seems to have inserted a small independent mold, an inset mold, for the handle lug.

While the use of inset molds by Western Zhou casters is now well established, persuasive Shang examples are rare indeed.⁴ On the present *you*, each of the rope-handle lugs is surrounded by a square patch of *leiwen* distinctly separate from the rest of the decoration. Retouching of the mold join on this axis did not entirely prevent mold marks, faint ones being visible on the tops of the flanges, but there is no trace of a mold mark within the square that contains the lug. Instead, the mold mark appears to run up to just under the lug, then split and go around the perimeter of the square (Fig. 21.2). This suggests that everything within the square was produced by an independent inset mold. To make the lug

perforated, this mold required its own tiny core, a vertical cylinder secured at top and bottom so as not to touch the main core of the vessel (otherwise there would be a hole in the vessel wall behind the lug) (Fig. 21.4). On the casting surface of this small square mold—the surface that formed the bronze we see—the moldmaker added some *leiwen* around the depression that was to form the lug, but the bare patches on the vessel wall behind the lug and just above and below it indicate that he made no attempt to extend this *leiwen* onto the back of the core. Judging from photographs, a double-owl *you* in the Brundage Collection has handle lugs in square surroundings of very similar appearance, and here too inset molds might have been employed (Fig 21.1).⁵

However, similar rectangular patches surround three-dimensional heads on many late Shang and early Western Zhou vessels where inset molds were surely *not* used.⁶ When the heads are solid rather than perforated, and moreover not in particularly high relief, there could have been no possible reason for using an inset mold or for treating the heads any differently than any other element of high-relief decoration. It is possible that these patches are vestiges of a past casting technique, analogous to the non-functional cross-shaped indentations on later *gu* vessels descended from the functional cruciform openings on earlier ones.

The lugs on the Freer owl *you* are by contrast prominently three-dimensional and vertically perforated. Even so, the caster's reason for using inset molds here is not altogether clear, since he had a simpler option: the lugs of the *hu* No. 27 are also vertically perforated, but the mold mark running down the middle of each lug suggests that the lug was on the model for the vessel: a mold was formed on the model, sectioned, and removed, leaving the imprint of the lug in the edges of adjacent mold sections (Fig. 21.3). Locating a mold division on the axis of the lug

gave the caster easy access to the part of the mold where he needed to insert a core for the lug's perforation. The caster of the owl *you* could presumably have proceeded in the same way, but for some reason he chose instead to use a separately constructed mold for the lug.

PJL

¹ Gettens appears to be mistaken in suggesting that these birds “seem to have been made separately from identical molds or stamps” (Pope 1967, p. 272). The birds are similar but have different numbers of scales on the their bodies, so they could not have been made from identical stamps.

² Compare the coiled serpent in the *pan* No. 41.

³ Gettens, noting that the knob handle has been reattached by a modern repair, suggests that it is not original, partly because it differs from the lid in composition and partly because it is decorated with *taotie* which, he says, do not appear elsewhere on the vessel (Pope 1967, p. 272). But the difference of composition may only mean that it was cast in a separate pour from the lid, and similar *taotie* do in fact appear elsewhere on the vessel, on the underside.

⁴ Gettens 1969 does not mention the technique at all, but technical studies of bronzes from early Western Zhou tombs at Baoji show it to have been often used by Western Zhou casters (see the excavation report, Lu 1988), e.g. to make the horns projecting from the surface of a *gui* (Guggenheim 1998, no. 35).

⁵ Umehara 1959, vol. 1, pl. 39; d'Argencé 1977, 46–7. A double-owl *you* in the Pillsbury Collection in Minneapolis is another possibility (Karlgrén 1952, p. 72).

⁶ See e.g. Freer No. 23 and Bagley 1987, nos. 68, 97–101. Several such heads show obvious mold marks running through the heads on axis with the vessel's principal mold marks (e.g. Bagley 1987, fig. 98.1).

Fig. 21.1. Owl *You*. Height 18.1 cm. Brundage Collection.

Fig. 21.2. Lug on *You* No. 21.

Fig. 21.3. Lug on *Hu* No. 27.

Fig. 21.4. Schematic diagram of inset mold for lug of double-owl *yau* No. 21.

1 mold section; 2 inset mold; 3 core of inset mold. Shaded areas correspond to square of *leiwen* on vessel surrounding the lug. The vessel was probably cast upside down and the mold is therefore shown here upside down. Drawing by Peter Lu.

Fig. 21.5. Underside of *You* No. 21.

No. 22. *You* (40.11)

Height (including handle) 36.5 cm

Weight 9.67 kg

Inscription of one character in the lid and inside the vessel on the bottom

Pope 1967, no. 49; Lodge 1946, no. 16

This monumental vessel, elliptical in cross section, draws the viewer's attention above all to its sagging main register, to which the vessel owes much of its effect of massive weight. The main register and the top of the lid are decorated with *taotie*; each of the three narrower bands of design houses its own species of dragon. The heavy and deeply notched vertical flanges on the major and minor axes of the vessel are interrupted at the horizontal divisions between registers of decoration, emphasizing the separation already made conspicuous by undecorated horizontal strips. Directly above the *taotie* of the main register is a feline head that serves as the terminal of a bail handle. The handle, decorated with cicadas, arches over the lid to end in another feline head on the far side.¹ The handle orientation, not sideways but front-to-back (compare with *you* No. 20), prevents the handle from interfering with the silhouette of the vessel, which includes two projections that resemble birds' beaks, possibly derived from the beaks on double-owl *you* such as No. 21. The bulge of the main register emphasizes the three-dimensionality of the already domineering *taotie*.

The *taotie* design here is a spectacular example of Style V, the raised elements being carefully, individually shaped with utmost finesse. Special attention was paid to the protruding eyes and their deeply indented pupils, the pointed ears that are slightly dished, and the lunate eyebrows. Bodies rise gently from the *leiwen* in smoothly rounded relief, but horns rise abruptly, with sharp edges, dished tops, and tips that spiral into particularly high relief. The *taotie* bulges slightly along the central flange and the diamond on its forehead forms a bump on two sides, as if claiming possession of the flange as its own nose.

Intaglio lines on the *taotie*'s upper jaw swirl into two nostrils along the sides of the flange. These carefully shaped features give the relief an effect of extreme richness. Similar *taotie* are applied to the lid of the vessel, but rotated ninety degrees to suit the available space and perhaps to orient them toward the massive hooks that project from the side of the lid.

The *taotie* is set off by a contrasting ground of fine rounded *leiwen* spirals, but the two are not disconnected from each other; on the contrary, they interact in the liveliest fashion. Take the C-shaped horn as an example: the tip that rises highest off the surface sinks down again to flow into a *leiwen* spiral. This intricate interaction of the *leiwen* ground and relief décor, seen at many points on the vessel, makes it impossible to believe that they were executed separately, as some scholars have suggested.² The claws, lower jaws, and tails of the *taotie* provide additional illustrations, as do the horned dragons at the corners of the main register, and also the dragons in the other registers. So close a relationship could hardly arise if motifs were executed on the model and the *leiwen* was then mechanically filled in on the mold section.

The three narrow registers have three kinds of dragons. The most peculiar one inhabits the band above the *taotie*, where the handle terminates (Fig. 22.1). It has a bottle-horn and the snout of an elephant; here as elsewhere curling elements spiral into the *leiwen*. The bottle-horns, which curve into startlingly high relief at their back ends, are a particularly striking illustration of the careful shaping of relief elements on this vessel. The ring foot has somewhat tamer dragons with bird-like beaks, two in each quadrant. The collar of the lid, which is slightly concave, has dragons

with leaf-shaped ears and gaping jaws that face downward.

The vessel was cast in four pours of metal: body, handle, lid and lid knob. The body and the lid were cast in four-piece molds; mold marks are clearly visible along the four flanges. The knob on the lid was cast on; it is partially hollow without a clay core. The round handle tenons over which the feline heads lock were cast together with the vessel. After the vessel was cast, they were probably surrounded with clay so that the handle could be cast with its hollow terminals locked over the tenons but not actually in contact with them.³ The vessel is in very good condition; only one region on the lid shows signs of repair. Interestingly, Gettens shows that extensive areas of the vessel have been touched up with green paint, probably to meet the taste of early twentieth century western connoisseurs.⁴

A one-character inscription is found inside the lid and on the bottom inside the vessel. It is a bird with a *ge* halberd standing on its head. The character is traditionally interpreted as a clan sign.⁵

An interesting comparison can be made between the Freer *you* and a *you* found at Ningxiang county in Hunan province (Fig. 22.3).⁶ Although both are stellar examples of their vessel type, their visual power seems to depend on somewhat different sources. The Ningxiang *you* aims at perfect symmetry and order, while the Freer *you* acquires its excitement from subtle asymmetries.

Approximately the same height, the two *you* are very similar in silhouette, but the Ningxiang *you* has a taller undecorated foot molding, almost like a pedestal, its flanges are thicker and more boldly accented, and the two horizontal projections on the lid are larger. An additional register of decoration is inserted between the main register and the one just below the lid, and the lower edge of this register is marked by barbs on the flanges, a feature which does exist on the Freer vessel but does not there mark the edge of another band of decoration. The Ningxiang *you* also differs in surface decoration. Instead of the standard *taotie* motif, the main register is

occupied by eight birds confronted in pairs across the flanges. Smaller birds with fluid tail plumes replace the dragons in two of the three bands on the Freer vessel, leaving only the shoulder band to be inhabited by a stiff rendering of the familiar dragon motif. But these basic differences between the two vessels, obvious and easy to describe, contribute less to their impact than subtler features and the ways in which those features interact.

The Ningxiang *you* does not bulge as much as the Freer vessel; it has a sharper and crisper figure. In the main register, each of the four compartments created by the flanges is subdivided unobtrusively into two equal square units. Nearly identical birds occupy each of the squares and their tails curl hastily to vertical halt along the edge of the unit, indicating clearly that the two squares are meant to be distinct. The dragons on the shoulder with their right-angled bodies are flat, rigid, and orderly, unlike the undulating small birds on the foot and lid. If we ignore the slender dragons on the bail handle, departures from perfect bilateral symmetry are so minute as to be almost undiscoverable. The bands of ribbing on the body and lid add to the impression of regularity. Even the usually unsymmetrical *leiven* ground was executed painstakingly in square spirals of almost uniform size (Fig. 22.2). While the hooked and curled elements of the high relief *décor* still mingle with the *leiven* ground, the interaction seems slightly forced and perfunctory. At such junctions between the high relief and *leiven*, the curling elements turn sharp angles to match the surrounding squared ground spirals. The interaction is not very interesting, not varied or lively enough to draw viewer into close inspection of the surface. Evidently the labors of the casters were instead directed above all at orderliness: by giving each sunken line a clean and crisp look, they achieved a global effect of sharp elegance rather than a local effect of rich inventiveness. Emphatic symmetry gives the vessel a sense of structural balance that is less central to the effect of the Freer *you*. The Ningxiang *you* is static; it exercises its power at a

distance, when the vessel is seen as an architectural whole.

Bilateral symmetry is conspicuous and powerful in the Freer *you* too, but what the ancient casters accomplished in this vessel goes beyond solemn order to something more interesting. The symmetry of the Freer *you* is only the frame that dominates a first careless impression; the vessel owes its energy to the variety that springs to life within the frame. In the shoulder band, one dragon has a much longer elephant snout than its supposedly symmetrical partner, and a much longer body. Each dragon has been given individuality, a personal character. Such variations are too obvious and too enlivening to be dismissed as accidents (the casters could have easily corrected such accidents). The makers of the Freer *you* saw life in asymmetry, and they saw *leiuwen* not as a neutral backdrop for animal motifs but as a medium itself agitated by the animals and infused with life. In the band on the side of the lid, next to the central flanges, on one side a series of small dense spirals crowd together like boiling bubbles, while on the other side larger spirals bring the surface to a gentle simmer. Such variation shows a caster who is not routinely filling in a background but who is at least as excited by the spirals as by the animals that float among them. The splendor of this vessel comes from the casters' ability to take a standard, established vessel type and give all its elements fresh attention, shaping the components of the *taotie*, allowing it to bulge gently along the central flange, and making it inseparable from the *leiuwen* that spirals everywhere. The Ningxiang *you* has unsurpassed impact at a fixed distance; the Freer *you* draws us ever closer.

DTL

¹ The idea that these heads are feline is supported by the design on the underside of the handle, where a series of shields, alternately filled and unfilled, is

found. This motif is commonly used to depict the markings on the tail of a tiger, e.g. the one on a stone chime unearthed at Anyang in 1950 (Guggenheim 1998, no. 9) and the tigers on the lid No. 38.

² E.g. Gettens (1969, p. 58) suggests that, because the *leiuwen* is not symmetrical, it is "engraved directly on the mold rather than in the original model." His discussion of this vessel also states that the elements in high relief are identical on opposite sides of the vessel, and he infers that pattern stamps were used to create the high relief patterns on the model. This however is not accurate. Examination shows that the high relief patterns are *not* identical on opposite sides of the vessel, and the close interaction of the relief patterns and *leiuwen* suggests that both components of the decoration were executed together, on the model presumably.

³ Bagley in private communication made this suggestion. Gettens, on the other hand, suggests that the swinging handles of such *you* were sprung into position over the tenons (see Pope 1967, p. 281 and Gettens 1969, p. 88). Gettens' suggestion assumes that the bronze handle was flexible and springy enough to be bent and to resume its original shape after bending. Given Shang casters' expertise with casting on, and indeed their regular use of it for handles of other *you* (e.g. Nos. 20-21, 23-5), Gettens' suggestion does not seem entirely persuasive.

⁴ The application of false patina to uncorroded areas or over less appealingly colored corrosion was a way of giving bronzes a sense of age and antiquity (see Gettens 1969, p. 192, fig. 258 for an excellent illustration). Early modern Western collectors tended to choose bronzes that look green, trusting patina as evidence of authenticity.

⁵ The bird-plus-*ge* inscription also occurs on a *ding* at the Sackler Museum, Harvard (Beijing 1997a, pl. 37; see also Chen 1977, vol. 1, A7). The bird and the halberd are drawn facing left on the *ding*, right on the Freer *you*. While the contour of the character is similar, the inscription on the Freer *you* is filled in, while the Harvard inscription shows only an outline of the bird and halberd. There appears to be another *ding* that probably forms a pair with the Harvard vessel. Other examples of this inscription are found on an *yu* also at the Sackler Museum and a *lei* (see Chen 1977, vol. 1, A142 and A782).

⁶ Guggenheim 1998, no. 26.

Fig. 22.1. Detail of *you* No. 22.

Fig. 22.2. Detail of *you* from Ningxiang.

Fig. 22.3. *You* found in Ningxiang county, Hunan Province. Height 37.7 cm. After Guggenheim 1998, no. 26.

No. 23. *You* (11.36)

Height (including handle) 32.4 cm

Width 25.1 cm

Weight 5.70 kg

Inscription of three characters

Pope 1967, no. 56

The silhouette of this vessel curves out above the flared foot and then more gently slopes inward. In cross section the vessel is almond-shaped with the handle on the long axis. The tall collar of the lid continues the inward curve for a short distance and then flares to a sharp corner at the domed top of the lid, which is surmounted by a knob. The handle, indented with winding lines to imitate rope, is attached to the vessel by two large loops very high on the body. The handle crosses the vessel in an almost rectangular arch and does not rise much above the top of the vessel. The loops that secure it are planted in the sole register of decoration on the body of the vessel, a band bordered above and below by rows of raised circles. Between these rows, the decoration, as fine as *leiwen*, falls into rectangular units. Each unit consists of a pattern of nested diamonds that extends three diamonds horizontally and two vertically. Centered in this band is a sketchy animal head, its upper half apparently horns or ears, its lower part almost featureless except for a pair of eyes. A similar band of decoration goes entirely around the domed roof of the lid. The foot of the vessel is undecorated except for two bowstring lines circling it. Two holes above these lines, one on each side of the foot, are on the axis with the handle terminals. A regular grid of raised lines appears under the body of the vessel.

The vessel surface is very worn or abraded, and in some places the decoration cannot be seen. The surface is a dark greenish brown, almost black on the exterior. The interior is a mixture of dull bronze and light green.

The vessel has a short inscription on the body alone, inside on the bottom. It consists of the two characters *Fu Gui* "Father Gui" along with a

drawing of a fish, perhaps a clan sign. The stem character *gui* has a form that on oracle bones is seen only in the reigns of the last two Shang kings, suggesting a late Anyang date for this vessel (and for the next, which is inscribed with the same character in the same late form).

Many similar pieces have been excavated at Anyang. GM1015:4 is almost identical in both shape and decoration.¹ PNM172:3 and GM875:6 have the same shape and the same animal heads in the band of decoration, but the decoration is more elaborate.² The origins of this *you* type are discussed in entry no. 70 in Bagley 1987.

MGU

¹ Beijing 1985, pl. 221.

² Beijing 1985, pls. 67, 190.

No. 24. *You* (11.37)

Height 32.8 cm

Width 23.8 cm

Weight 4.37 kg

Inscription of five characters

Pope 1967, no. 57

This vessel is nearly identical to No. 23, but it lacks the grid of raised lines on the underside and the two holes in the base, and it is in slightly more worn and corroded condition. The color is similar but a bit lighter.

The inscription appears on both lid and body of the vessel and is very finely written, although the characters are arranged slightly differently in the two places. It is comprised of the dedication *Fu Gui* or "Father Gui," an undeciphered emblem conventionally called *Xi Zi Sun*,¹ the character "woman," and an undeciphered character. The odd arrangement of the characters

leaves uncertain the order in which they are meant to be read.

MGU

¹ See Bagley 1987, pp. 493-4. Ma 1988, pp. 3-4 (no. 5) simply calls it a clan sign, an interpretation that explains neither its wide occurrence nor the varied contexts in which it appears (e.g. in inscription no. 17 in Ma 1988).

Body

Lid

No. 25. *You* (09.258)

Height (including handle) 29.2 cm

Weight 3.32 kg

Inscription of six characters in vessel and lid

Pope 1967, no. 53

This *you* is a cylinder with a swing handle and a removable lid. The cylinder's surface is divided into six bands, none with flanges. The top band is plain. Below it is a register of Style V birds facing towards leaf-horned bovine heads and away from the bottle-horned bovines at the ends of the handle. Further down are a band of vertical ribbing, a register of thin dragons, another band of ribbing, and a final register of birds. In the registers of birds and dragons the background is *leiven*. Below the lowest register the bottom edge of the vessel flares outward a little beyond the rest of the cylinder. The lid has a cup-shaped handle; two holes in the side of the cup might, like the cross-shaped holes in *gu* vessels or the holes in other ring-footed vessels such as the *yu* No. 42, have been left by core supports. Beginning at the base of the cup the lid carries a thin band of swirl decoration, a band of ribbing, and then a register of birds and *leiven* like the registers on the vessel below. The swing handle is decorated with elongated dragons on a *leiven* background. A similarly decorated but slightly smaller *you* formerly in the Edward Chow collection is identically inscribed and must have been made as a mate to this vessel.¹

The vessel was probably cast in a four-division section mold. Mold marks are visible just below the handle loops as well as faintly beneath the leaf-horned bovine heads. The handle was probably cast onto the loops that project from the cylinder, the loops having been cast as a part of the vessel. The rounded bottom is recessed about six centimeters above the base rim. An ancient repair may have been made in the area just above and to the right of the inscription in the bottom. Judging by its weight-to-size ratio the walls of

this vessel are thicker than the average of Shang vessels.

Both in the bottom of the vessel and in the lid is an inscription of six or perhaps seven characters. Given the inscription's genuinely cast appearance, the difficulty of faking an inscription so far below the rim, and the lack of evidence of physical alteration of the inscription area, Barnard's doubts of the authenticity of the inscription seem unjustified.² The inscription may be translated "X made Mother Xin's ritual vessel," where X is an emblem composed of a *yaxing*, a graph inside the *yaxing* read *ji*, and a graph below the *yaxing* showing a man seen from the front with his head turned to the side. This emblem occurs on a number of late Anyang bronzes as well as on a few Western Zhou bronzes.³ The same borderline date is suggested by the decoration of the vessel, for its combination of vertical ribbing and birds appears frequently on *you* vessels both before and after the Zhou conquest.⁴

Rough cleaning has deprived this vessel of much of the fine detail it once possessed. Heavy corrosion was probably chiseled off, yet reddish-brown corrosion still covers all of the vessel. Scratch marks on the inside of the cylinder which appear to be from steel wool probably are the result of cleaning. Surface areas which would normally be smooth are scarred from these cleanings. The surface is almost glossy in some spots, indicating that it may have been polished or waxed at some point.

CFH

¹ See Bagley 1987, p. 386 and note 6. *You* of this type and also of the oval-bodied type represented by the Freer *you* No. 22 seem often to have been made in pairs that differ only in size.

² Barnard in Pope 1967, p. 302.

³ Bagley 1987, p. 327.

⁴ Guggenheim 1998, no. 26, is a *you* from Hunan likely to be of late Anyang date, while Pope 1967,

no. 50, is likely to be Western Zhou. Both of these are oval-bodied *you*. The dating of cylindrical *you* like the present one is discussed in Bagley 1987, p. 386; not mentioned in his discussion is a pair of cylindrical *you*, one larger than the other, decorated with birds and ribbing, from an early Western Zhou tomb at Baoji (Lu 1988, vol. 2, pl. 22:1-2).

Body

Lid

No. 26. *Hu* (49.5)

Height 17.5 cm

Weight 94 g

Not inscribed

Pope 1967, no. 4

This *hu* is a small ring-footed jar with a circular cross section. The lid, which sits on the slightly flared rim, has a mushroom-shaped knob decorated with a whorl pattern. The upper half of the vessel is a slender neck; the lower half sweeps outward to twice the neck's diameter before contracting to the ring foot. Near the mouth the vessel is plain except for two horizontal lines. The most prominent register of decoration, on the neck, contains three *taotie*, each bisected by a hooked flange. These *taotie* are executed in a variant of Style IV in which the ground, instead of being filled by *leiwen*, has been carved away entirely. Below them, as the vessel begins to swell, is a register of thread-relief dragons bordered by small circles. The belly of the vessel carries a purely geometric pattern of interlocking T shapes, almost identical to the pattern on the belly of a *pou* in the Sackler Collections.¹ A continuous band of spirals runs around the ring foot. On the lid are three *taotie* like the ones on the neck, again bisected by hooked flanges. These *taotie* face toward a whorl pattern at the base of the knob which repeats the whorl on the knob's cap.

The hooked flanges on this piece are a curiosity because they are not positioned at the mold joins: the mold marks are at the sides of the *taotie*, where there are no flanges. A clue to the method of fabrication comes from the inside of the lid, where the metal of one flange can be seen pushing through. Evidently the flanges were precast, probably in simple two-part molds, and then embedded in the main mold sections so as to be incorporated into the finished vessel and lid. The vessel wall is slightly thickened on the inside wherever flanges are present on the outside. Why were the flanges precast? Perhaps the caster had

not yet realized that flanges could easily be dealt with if mold divisions were aligned with them. Or perhaps his concern was that the hooks of the flanges would not fill completely during the pour if they were cast as part of the vessel. In making the Freer *jia* No. 7 the caster included both precast and integrally cast flanges: the two flanges running along the mold marks were cast as one with the vessel while the remaining three were precast. Perhaps both of these vessels represent an early stage at which the caster had not learned to divide the mold on all the axes where he wished to introduce flanges.²

When it was new, all the flat and raised portions of this vessel were probably evenly polished. Now the surface is an overall dull green. Irregularities under the belly may be spacers. Modern repairs have been made to a few parts of the *hu* where there are interruptions in the *leiwen*. A solder join runs just past one dragon's eye and through the main register halfway between a flange and a mold mark. X-rays reveal a lead insert carved to match the decoration of the main register, as well as numerous solder joins not visible to the naked eye.³

CFH

¹ Bagley 1987, no. 53.

² Bagley 1987, p. 43.

³ Pope 1967, p. 44.

No. 27. *Hu* (48.1)

Height 38.3 cm

Weight 10.0 kg

Not inscribed

Pope 1967, no. 5

Illustration on facing page after Umehara 1964, pl. 94

Rising from a slanted ring foot, the elegant S-curved silhouette of this vessel is interrupted only by a pair of handle lugs that project from the neck. The vessel is elliptical in cross section and therefore has a preferred view, a view in which its Style IV decoration is seen to best advantage.¹

The vessel carries six registers of decoration, three of which contain *taotie* bisected by low triangular ridges. In the largest of the six, the main register, the *taotie*'s C-shaped horns double as dragons, their curved bodies bordered on one side with a pattern that originated on flanges.² In the register just below the lugs, the *taotie* is a little smaller and has more normal horns; a still simpler *taotie* occupies the topmost register on the vessel. Where the extreme ends of these registers vanish around the side of the vessel, each *taotie* unit is filled out with little creatures that face the mold marks. In the main register the creature looks backward over its body toward the *taotie*; in the band below the lugs, it is bird-like; in the topmost band it is a dragon. These bands with prominent *taotie* alternate with narrower bands containing more varied motifs. The band at the level of the lugs contains a procession of funny dragons all headed in the same direction. The band just above the main register contains four filamentous *taotie*, two on axis with the more prominent *taotie* in other registers and two facing

out from the sides of the vessel, on axis with the lugs. The band on the foot contains four eyes, each in a setting of hooked lines. The lugs, perforated from top to bottom, take the form of three-dimensional animal heads.

The vessel was cast in a two-piece mold but the mold was removed from the model in at least four pieces. The lug handles were cast in one pour with the vessel. Two rectangular holes at the top of the ring foot are aligned with the handle lugs higher up. Malachite and cuprite are the principal corrosion products.

No. 27 is similar to a Style IV *hu* in the Sackler Collections which Bagley dates to the 13th century.³ The Sackler *hu* has a flatter shape but related Style IV bands of decoration and triangular ridges on the central axis of the *taotie*.

PJL

¹ The same flattened shape is exploited in the elliptical-bodied *you* and the *zhi*, at least the first of which is a descendant of the elliptical *hu*.

² For this pattern see entry No. 19.

³ Bagley 1987, p. 340-2.

No. 28. *Zhi* (38.6)

Height 19.4 cm

Weight 79 g

Inscription of one character in lid and vessel

Pope 1967, no. 71

This *zhi* is a small cup, a little larger than a modern wine glass, with an oval cross section. A high molded ring foot supports a bulging body which narrows and then flares outward at the top. The lid, shaped like a small section sliced off an ellipsoid, is surmounted by a knob with a whorl design. The main register of decoration contains two large *taotie* flanked by downward-facing dragons; the same design is adapted to fit both the lid and the register immediately below the lid on the vessel. The ring foot has a narrow band of confronted dragons. A similar band just above the main register contains more bird-like dragons. Two plain flanges run down the front and back of the *zhi*, bisecting each *taotie*, and similar flanges appear on the lid. The *taotie* on this vessel are formed of disconnected parts much like the *taotie* common in Style Va, but all *leiwen* has been omitted to produce “melted relief.” Though the design elements do not carry *leiwen*, raised bumps accent their terminal points.

The inscription of one character, in the vessel and repeated in the lid, is of unknown significance; Chen Mengjia cites four other occurrences but offers no reading.¹ A slight rectangular depression surrounds the inscription in the lid, suggesting that a rectangular piece of clay carrying a positive of the inscription was prepared separately and then set into the core of the lid.²

The lid and body of this vessel were each cast in one piece. A small shrinkage depression in the lid below the knob argues that it was cast as a part of the lid. No mold marks can be discerned, probably because the absence of *leiwen* made it easy to polish them down, but some disjunction in the decoration suggests that the vessel was cast in a four-piece section mold. What appear to be spacers are visible underneath the bulge of the cup. The recessed bottom of the cup, located at the juncture of the foot and body, is plain on the underside.

The corrosion on the surface of this *zhi* is a smooth gray-green with many hairline cracks in it. Perhaps the cracked areas are actually paint that was applied recently and dried unevenly. Gettens notes some spots of artificial patina which fluoresce under ultraviolet light.³ On the bottom of the ring foot some chipped rough corrosion preserves a cloth impression. There is no evidence of any repairs.

CFH

¹Chen 1977, vol. 1, p. 100, A518.

²Pope 1967, p. 396.

³Pope 1967, p. 397.

Body

Lid

No. 29. *Zhi* (79.47)

Height 17 cm

Weight 505.2 g (body), 225.5 g (lid)

Inscription of three characters

This vessel is elliptical in cross section. It has a flared ring foot with a slight molding. Above the foot a rounded body contracts and then flares outward to meet the domed lid. The ends of the loop handle on the lid take the form of vaguely suggested animal heads facing downward. A single band of decoration bordered with small circles runs around the neck of the vessel and similar bands appear on lid and foot. The pattern between the circle borders looks rather like *leiwen* but is organized as a series of equally spaced circles connected by diagonals forming a pattern reminiscent of a running spiral. An X-ray reveals extensive modern solder repairs to the body though none in the decorated areas. The vessel surface is a shiny green. The foot has three small holes on one side where someone drilling for a metal sample accidentally drilled all the way through.

Inside, on the bottom of the body (and not repeated in the lid), is a three-character inscription consisting of a dedication to *Fu Ding*

“Father Ding” preceded by a large and handsome emblem that is usually interpreted as a clan sign. The clan sign consists of a *yaxing* framing the drawing of an animal and an elegantly pictorial rendering of the character *mu* “sunset.” Bagley has supplied a thorough listing of other vessels inscribed with this clan sign.¹ No fewer than eleven of the twenty vessels he lists are, like the present *zhi* (which he does not list) dedicated to “Father Ding,” among them the Freer *zun* No. 19. No rubbing of the inscription of No. 29 is available, but it is very similar to the inscription of No. 19.

MGU

¹ Bagley 1987, pp. 303–4.

No. 30. *Fang yi* (1991.3)

Height 22.0 cm

Width 13.8 cm

Depth 10.6 cm

Inscription of two characters on body, two on lid

Illustration on facing page after Huang 1942, 1.22

A classic example of Loehr's Style III, this *fang yi* is very sharply cast. Small flanges run the entire length of the vessel on the faces and corners, continuing onto the lid but stopping short of the knob. The sides of the vessel carry large *taotie* with pairs of dragons above and below.

Prominent eyes anchor the *taotie*, most of which is executed in barely modulated sunken line. Stacks of horizontal quills above the eyes flow into large spirals that suggest horns, and a mouth is detectable below the eyes, but the creature as a whole is still entangled with the patterns that fill the rest of the rectangular space. The dragons in the registers above and below likewise blend into their surroundings, but they have more distinct shapes. The dragons in the lower register, placed on either side of an arched opening in the foot, are given up-curved snouts to fit their compartments. The *taotie* and dragons on the sides of the vessel are condensed versions of those on the front and back.

Upside-down *taotie* decorate all four sides of the lid. While their swirls and quills are similar to those of the *taotie* on the body of the vessel, their angled confines dictate different proportions. The knob handle repeats the shape of the lid and is decorated on front and back with upside-down *taotie*, but on the triangular sides it carries only a concentric triangle pattern.

There are several irregularities in the decoration. While the designs are more or less symmetrical, they differ noticeably on opposite sides of the vessel, for instance in the quills above the eyes of the *taotie*. Modern restoration may explain some of these differences, indeed one

side of the vessel is mostly modern.¹ None of the eyes on the vessel body have pupils while the eyes on the lid do; but in other respects the designs on body and lid seem closely matched. The knob on the lid appears to have been cast integrally with the lid, as there is no evidence of metal overflow. The flanges on the corners of the vessel (but not those on the lid) are modern repairs made entirely of copper and painted over. The patina on the body is a light green with patches of red corrosion and bare copper; the patina on the lid is a slightly lighter shade of green.

The inscriptions in lid and body are curiously different, in draftsmanship as well as in content. Both include an undecipherable graph known from many other bronzes,² but on the body this graph is followed by the stem *gui*, on the lid it is preceded by the stem *yi*. In other words, the vessel and lid seem to be dedicated to two different ancestors, a discrepancy difficult to make sense of even if we were to suppose that the lid inscription is a modern addition (the handsomely cast inscription of the body surely is not).

NRL

¹ Report of technical examination by W.T. Chase, 28 September 1990, Freer Technical Laboratory files.

² See Bagley 1987, pp. 241–3, for examples and discussion. On the Freer *fang yi* the graph is written differently in lid and body, the composition of strokes seen on the body being the more usual.

Body

Lid

No. 31. *Fang yi* (54.13)

Height 19.3 cm

Width 10.8 cm

Weight 1.25 kg

Inscription of one character on the inside wall

Pope 1967, no. 36

Two shallow horizontal grooves divide the rectangular body of this small *fang yi* into three registers of Style V high relief decoration, to which the faintly curved lid adds a fourth. In the central register is a prominent *taotie*, its face looking squeezed to make room for a pair of overgrown horns. Without the flanges that commonly bisect the motif, this *taotie* is a tightly connected unit with a simple, clearly defined shape, almost resembling an inserted plaque. Its fluid curves and gently swelling relief seem naturalistic, almost fleshy. The nose, carved with swirling sunken lines, is broad and prominent and the ears look nearly human. On the lid, the same *taotie* is turned upside down and adjusted to fit a trapezoidal compartment. On the body of the vessel, narrow bands of dragons appear above and below the *taotie*. Above are two confronted dragons with snake-like S-shaped bodies, bottle-horns, and wide-open jaws resting on the bottom of the register. On the foot, simpler dragons face toward the corners of the vessel, their bodies drastically abbreviated to clear the arched openings in the foot.

These same four bands of décor reappear on the sides, but all the registers are differently proportioned and smaller, and all the motifs change proportions accordingly. The *taotie* in the central band is almost square. On the end of the lid, where the space is not a trapezoid but a triangle, the *taotie*'s face has shrunk to become a small appendage to its horns. Most interesting are the dragons in the upper register, which have merged into one creature, their heads fused into a *taotie*-like face with a single bottle-horn, a deliberate pun by the caster.¹

Each design compartment on this vessel is firmly outlined by horizontal strips bare of

decoration and by the vertical edges of the vessel, which are left bare except for the notched T | T patterns usually found on flanges. The same markings continue from the body to the lid, tying the two parts of the vessel together. What is presented here is not a container with a top but rather one compact structure covered with clearly framed panels of decoration.²

The vessel was cast in a four-piece mold with mold joins at the four corners. Mold marks are easily detected in the narrow plain bands above and below the main register. A peculiar metal insert at the lower left corner of the main register on one side is probably an ancient repair, most likely a patch cast to fill a casting defect; its striated surface decoration was probably chiseled to disguise it against the *leiwen* ground. Gettens suggests the existence of some reddish brown and black inlays on small areas of the body and lid. X-ray diffraction indicates that they are cuprite and metallic copper.³ However, such inlay is not readily apparent because of the heavy corrosion. Corrosion also blurs large portions of one of the *taotie*, giving it a foggy appearance. The lid in contrast is better preserved and shows some fine *leiwen*. The knob and stem on the lid are cast through an opening and locked in place.

A sunken inscription of one character, a drawing of an eye set vertically, is found inside the body near the top. In longer inscriptions this character occurs commonly in the sense *chen*, meaning a court official, but here the horizontal line across the pupil is peculiar, and together with the hesitant draftsmanship raises doubt as to the authenticity of the inscription.

A *fang yi* in the Brundage Collection, Asian Art Museum, San Francisco has the same plaque-like *taotie* design and boldly notched corners as

the Freer vessel.⁴ These notched corners seem to belong to a distinct moment in the evolution of the *fang yi* shape. Early *fang yi* are without flanges or notched corners; they look like rectangular boxes sitting on a foot whose large arched openings seem to turn the foot into a four-legged support. Slightly later versions like the present one are more compact. The openings in the foot have diminished in size, and the rectangular foot has been absorbed into the vessel to become a fourth band of decoration; the shape as a whole is now far simpler and more unified. (Later, however, the foot re-emerged as a distinct part of the shape, as the next vessel, No. 32, illustrates.) The T | T notched marks are an obvious derivative of the flanges already existing on other vessel types. *Fang yi* with actual flanges must have

come into existence not too much later than notched *fang yi* because their surface decoration, in most cases *taotie*, can be dated stylistically to about the same time.⁵

DTL

¹ See Bagley 1987, p. 51, note 56 for comments on such puns and on the *taotie*-dragon relationship.

² Compare Bagley 1987, no. 77.

³ Pope 1967, p. 204.

⁴ Bagley 1987, fig. 77.11.

⁵ The evolution of the *fang yi* shape sketched here is presented in more detail in Bagley 1987, entry no. 77.

No. 32. *Fang yi* (15.136)

Height 22.2 cm

Width 15.2 cm

Weight 2.52 kg

Inscription of one emblem inside the vessel and lid

Pope 1967, no. 37

This *fang yi* has a roof-shaped lid and a body divided into three registers of decoration by two horizontal plain bands. While the vessel is decorated profusely with *taotie* and dragons, its architectural structure attracts more attention, perhaps chiefly because of the flanges, a total of eight. The flanges divide each side of the vessel into two compartments, and they have gaps and projecting tips to mark the horizontal divisions between bands of decoration. By comparison with the preceding vessel, No. 31, the division between bands is more emphatic here, and the foot is stepped back from the body, becoming a distinctly separate part of the shape. The flared mouth and flared unmolded foot are conspicuous and unusual.

Beaked dragons inhabit the foot and the upper register on the body, while *taotie* occupy the main register and reappear upside down on the lid. The *taotie* design is Style Va, its component parts being disjointed, raised in high relief, and covered with *leiven* similar to that of the ground. The surface décor has not been well preserved, mainly because of the handling practices of early collectors. Unlike most other Shang bronzes in the Freer collection, this *fang yi* had been thoroughly abraded and polished before acquisition and now has a smooth shiny surface with a bright green color owed to malachite corrosion.¹ The blunted high relief components of the *taotie* are flattened in some regions, and the surface décor damped and obscured.

This vessel was cast in an eight-piece mold.² Prominent mold marks can be seen on all eight flanges. Three spacers visible in the recessed bottom of the vessel supported the foot core during casting. An irregular mesh pattern in low relief on the underside is a feature seen on many

ring-footed vessels; its origin or purpose remains mysterious. The knob on the lid appears to have been cast integrally with the vessel. Four spacers are visible on the interior of the lid.

While the exterior of this vessel is not very impressive, the inscription inside is interesting. As usual on the *fang yi* shape, the inscription appears twice, once inside the vessel on the bottom and once inside the lid, but here the two inscriptions were not executed in the same way. In the vessel the inscription is intaglio but in the lid it appears in thread relief. Thread-relief inscriptions are relatively rare; the combination of two different techniques on one vessel is rarer still. The authenticity of both inscriptions is confirmed by Gettens, who notes the difficulty of forging raised inscriptions and observes that corrosion on the intaglio inscription is convincingly similar to that on the bottom of the vessel.³

The inscription is conventionally transcribed as *ya chou*, *ya* for the cross-shaped frame, and *chou* for the human figure and basket enclosed by the frame.⁴ Its meaning, however, is not known. In Western collections, this inscription is found on at least one other vessel, a *lei* in the Pillsbury Collection.⁵ Examples have been excavated at Sufutun in Shandong province, a site roughly contemporary with the Anyang culture (12th–11th centuries B.C.).⁶ The Freer *fang yi* may belong to a matched set of two or more *fang yi* with this inscription, as the National Palace Museum in Taipei owns a *fang yi* bearing the *ya chou* emblem that is very similar to the Freer vessel in size, shape, and decoration.⁷

Unlike most *fang yi*, which tend to have upright and compact silhouettes, this *fang yi* has a flared mouth and outcurved foot that give it a

somewhat sluggish effect. These features are even more pronounced on a *fang yi* in the Shanghai Museum.⁸ *Fang yi* of this shape are very unusual, but one similar example has come from Anyang.⁹ Comparing these *fang yi* with the more familiar type represented by a *fang yi* in the Winthrop Collection, Harvard University,¹⁰ hints that their peculiar curved silhouette was obtained simply by exaggerating the curvature of a subtly sloping foot, a development probably comparatively late among Shang *fang yi*.

Until the early 1900s, it was common practice among Chinese collectors for bronze vessels to be ground and polished to a luster and then waxed.¹¹ While the treated bronze may be more handsome than a heavily corroded bronze, it often loses much of its surface detail. Most corrosion is destructive to the surface decoration and closely bound to it. Removing it may well take away pieces of the metal underneath, as no doubt happened in the case of this *fang yi*. This problem is shared by most of the bronzes at the National Palace Museum in Taipei, which come mainly from the imperial collection of the Qing dynasty. Abraded surface decoration not only reduces a vessel's aesthetic appeal but can also make judgements of authenticity more difficult.

More or less careful removal of corrosion products is still standard practice in China today. Corrosion is removed not only from the exterior but also sometimes from the interior in order to expose inscriptions concealed or obscured by corrosion products. The most direct method of removing corrosion from an inscription is to use a sharp knife or chisel and carefully pick away the corrosion. This, however, can be extremely difficult, and the tool may also leave marks on the lines of the characters, harming the draftsmanship or even making a genuine inscription appear to be a forgery. Sometimes picking corrosion off an inscription may even come close to rewriting the inscription, since it may be difficult to avoid imposing one's own reading on a character. Chemical methods of corrosion removal have

also been used, for instance soaking the bronze in vinegar (a weak acid). This method, however, can only to be applied to the whole vessel or large areas. Poached hawthorn applied locally as a paste because of its slight acidity has also been said to be useful in treating corrosion. More recent conservation uses electrolysis to remove corrosion by applying a current to regions of a vessel immersed in ionic solution. The effectiveness of these procedures varies from vessel to vessel, but they all risk damaging whatever survives of an ancient bronze.

DTL

¹ Among the Shang bronzes in the Freer collection, this *fang yi*, the *yu* No. 42 and the *gu* No. 13 have all suffered from similar harsh surface treatment.

² Gettens, in Pope 1967, p. 208, suggests the use of a four-piece eight-division mold. In other words, he believes that the mold was removed in eight parts from the model, but that these were joined in pairs along the center flanges and retouched to make four mold sections for the metal pour. As a result of such retouching, one should expect to see more prominent mold marks along the corner flanges and fainter or no mold marks along the center flanges. In my examination of the vessel, however, I was unable to confirm Gettens' observation. The mold marks seem to me equally prominent and obvious along all eight flanges.

³ Pope 1967, pp. 209-10.

⁴ A comprehensive list of bronzes bearing this emblem (with or without further characters) is given in *Kaogu xuebao* 1977.2, pp. 25-7.

⁵ Chen 1977, no. A778.

⁶ Bagley 1999, pp. 219-21.

⁷ Taipei 1969, no. 26.

⁸ Bagley 1987, fig. 141.

⁹ Beijing 1997b, pl. 66.

¹⁰ Bagley 1987, fig. 131.

¹¹ Rong 1941, pp. 171-5.

Body

Lid

No. 33. *Pou* (09.334)

Height 17.1 cm

Width 24.2 cm

Weight 2.49 kg

No inscription

Pope 1967, no. 1

Resting on a tall ring foot, this squat round vessel has a main register filled with quadrangular lozenges that resemble tile work. Each lozenge centers on a round boss and is composed of a series of squared spirals. While this completely geometric motif is fairly common among Shang bronzes (see e.g. *ding* No. 45), its execution here is uncommonly crude. The lines are shaky, not always straight, and often variable in width. The squared spirals are often crooked, and the sizes of the lozenges vary irregularly. The pattern is continuous but the band is cut through by three equally spaced vertical mold marks. The squared spirals do not always join properly across the mold marks, and their bosses are often pushed to the side as if to avoid the mold divisions. In addition to the mold marks, each third of the circumference contains four faint vertical lines spaced at intervals each approximately equal to the width of one complete lozenge. Unlike the mold marks, these lines do not extend beyond the register. They are difficult to explain.

The shoulder band is decorated with a series of dragons executed in Style IV with a *leiven* ground finer than the lines of the main register. All the dragons are oriented in the same direction. Two thread-relief lines are the only decoration on the mouth; a band of large spirals is faintly visible on the foot. The Style IV decoration and the shape of the vessel suggest that it belongs to the early Anyang period. By comparison with other *pou*, however, its execution is unusually poor.¹ The vessel is heavily restored. According to Gettens, about one third of the shoulder region is modern repair work done in some sort of plaster material, the design being carved in and then colored with Paris green pigment.²

From a technical standpoint, the most curious feature of this *pou* is the additional vertical lines, which are spaced nearly evenly across each of the three mold sections. The fact that these vertical lines do not reach beyond the decorated band says clearly that they are not mold marks. Gettens suggested that these additional lines “may be joins in the wood or other material from which the model was made,”³ but the orderly way in which they are laid out around the vessel makes it hard to believe that they are an unintentional byproduct of the model material. Bagley in his discussion of a *pou* with interlocking T-shaped patterns suggests that such lines were drawn on each mold section as rough guidelines for freehand drawing of the patterns.⁴ In the case of the Freer *pou*, it is easy enough to believe that the shaky thread-relief patterns were drawn freehand (not to mention carelessly and incompletely) in the mold, but if the caster was indeed using the vertical lines as guidelines, he was nevertheless proceeding very freely, for while each line approximately bisects a diamond, it does not quite intersect the angles exactly. Whatever their origin, these additional vertical lines seem to occur frequently with the diamond-and-boss pattern, though in photographs they are hard to detect because they are very fine.⁵ On the diamond-and-boss *ding* No. 45, the lines are present but extremely faint.

One last technical observation remains puzzling. The depression that surrounds each of the round bosses suggests direct stamping on the model; it is hard to imagine how or why the depressions would have been made if the bosses were simple impressions on mold sections made with a round stud. But if the bosses were made on the model, and not along with the thread-relief

pattern lines in the mold, why do they conspicuously avoid the mold-join lines? This would be easier to understand if the bosses were executed on the mold sections.

DTL

¹ Compare for example Beijing 1997b, pls. 71-2, 74-5.

² Pope 1967, pp. 23-4.

³ Pope 1967, p. 23.

⁴ Bagley 1987, pp. 321-2, discussion of no. 53.

⁵ Bagley 1987, no. 99 is a diamond-and-boss *yu* with a nice close-up detail.

No. 34. *Pou* (13.30)

Height 37.2 cm

Diameter 32.1 cm

Weight 8.99 kg

Spurious inscription of 62 characters on the inside bottom

Pope 1967, no. 2

This *pou* with a lid is unusual in several respects. The lid has a large rosebud-shaped rattle on a tall post. Six large flanges on the lid are shaped like birds in profile; these flanges continue down the vessel body to be replaced on the foot by rectangular flanges with deep notches. The body is a very curvy S-shape with a high foot and a neck made prominent by the absence of decoration.

The motifs of the decoration are centered upon every second flange and raised in varying levels of relief above a *leiwen* background. In the upper register, pairs of horned flowing dragons undulate around circles of five raised dots. The body and tail of each dragon are raised in convex high relief, while the head appendages are in slightly dished relief. The large middle register contains a disjointed *taotie* whose parts are scored with unmodulated lines; similar *taotie* are inverted on the lid. The decoration on the foot is an elongated *taotie* only slightly raised in undecorated relief.

The curves of the relief elements, for instance the pointed ends of horns and ears, swirl into coarsely drawn *leiwen*. The bird flanges on the middle register are irregular; some flanges have five birds, others have six. They are not well aligned with the flanges on the foot, and the width of the decorated section between one flange and the next varies around the vessel. The line decorations on the raised *taotie* sections also vary conspicuously from section to section. These irregularities give an impression of rather sloppy execution.

Mold marks are visible on all the flanges, and they run continuously from the flanges onto the vessel, suggesting that the vessel was cast in one pour in a mold of six sections. Some bronze from the lid runs onto the post, indicating that the post was precast.

The vessel has suffered a certain amount of damage. Several spacers in the undecorated area above the foot have fallen out, and pieces of the flanges are missing. There are cracks in the body and lid, as well as evidence of ancient and modern repairs (as can be seen in the different colored patination). Corrosion has also taken its toll.¹

This vessel has nearly identical counterparts in the Sumitomo Collection² and the Nezu Collection.³ The rattle appears to be unique to this trio of *pou*. Several other features of these vessels are worth note, particularly the bird-shaped flanges and the dragons in the upper register, which embrace a five-dot pattern. On the strength of the bird flanges, Bagley takes these vessels to be southern castings, from the Yangzi region.⁴ The five-dot pattern appears to be a descendant of the whorl pattern common on many Anyang bronzes. Normally executed in sunken line, the whorl pattern was occasionally done in relief,⁵ and the present dot design seems to refer to such relief versions. It is comparatively rare. It appears on a *ding* in the British Museum,⁶ and also on a horn-shaped vessel from Anyang which carries dragons almost identical to those on the Freer *pou* but executed in Style IV.⁷

NRL

¹ Gettens discusses the corrosion products in detail in Pope 1967, pp. 30–31.

² Rong 1941, fig. 890.

³ Umehara 1942, pl. 27.

⁴ Bagley 1987, p. 548.

⁵ Beijing 1997a, pl. 101.

⁶ Rawson 1987, p. 65.

⁷ Beijing 1997b, pl. 35, from Anyang tomb M1022, Wuguan Beidi.

No. 35. *Guang* (38.5)

Height 23.5 cm

Width 31.1 cm

Weight 3.52 kg

Inscription of two characters in lid and body

Pope 1967, no. 43; Lodge 1946, pls. 5-6

This *guang* is extremely finely cast and combines three different zoological motifs yet remains surprisingly simple and elegant. In the front of the vessel the lid terminates in a grinning feline head, its wide ears, beady eyes and menacing, toothy grin declaring a family relationship with Alice in Wonderland's Cheshire cat. A notched flange runs almost the full length of the lid, terminating just short of the face of an upward-looking owl, its pointed beak and long ears protruding sharply towards the sky. The owl's face stands out uncluttered by *leiwen*, its eyes encircled by rings of scales decorated with intaglio lines. The body of the vessel is shaped like a seated bird whose mute face and blunt features stare out from the rear, beyond the owl's face, producing delightful counterpoint between the front and rear views of the vessel. Both the lid and the upper part of the body are covered in very fine *leiwen* in which float vaguely drawn creatures, while the lower part and the bird's neck and face are covered in scales. The main decoration of the body is the bird's large wing, which begins as a large spiral and sweeps backwards to the point where the bird's tail begins to double as the tiger's throat. Below the wing, on the elliptical foot of the vessel, are the bird's claw and leg, which are done in high relief. The bottom third of the foot is undecorated.

An inscription of two characters is cast inside the body and repeated in the lid. The characters resemble a building and a jade axe.

The lid, which has indentations inside behind the owl's ears and beak, shows little trace of mold marks. On the body mold marks are visible only at front and back, especially where they cross the foot, and along the tops of the bird's ears, indicating a transverse division in the mold: a

separate mold section formed the top of the bird's head. Noting the few and unobtrusive mold marks on this richly decorated unflanged vessel, Bagley used it to argue against the theory that flanges were needed to conceal mold marks.¹ Gettens' technical observations mention evidence of a spacer in the bottom. On the underside the bottom carries a coarse mesh pattern seen on many ring-footed vessels but not yet satisfactorily explained; also of uncertain purpose are the brackets seen where the inside of the foot meets the body (perhaps they served to augment the flow of bronze towards the bottom?). The hard clay ring around the inside of the foot appears to be a residue of the original clay mold.

In design this *guang* is unique. While more conventional *guang* (e.g. No. 36) have a handle at the end opposite the pouring channel, here the handle has been replaced by the neck and head of the seated bird, which might have served as a handle but which can hardly have been designed with functional convenience in mind. The sitting bird is itself a unique feature in a vessel type that is built more often from two animals — tiger and owl — than from three, while the surface decoration is unusually simple (compare, at the opposite extreme, No. 37). The wings so prominent on the sides of this *guang* resemble those on several *guang* from Fu Hao's tomb² closely enough to suggest that the Freer *guang* is of about the same date, i.e. about 1200 BC, though in execution it seems distinctly finer than Fu Hao's bronzes.

DMF

¹ Bagley 1990, p. 19: "Flanges have nothing to do with mold marks; they were added to stress vertical divisions in the decoration, and when they lie at mold join lines it is only because the mold join lines are the boundaries between units of

decoration. In other words, flanges were not added for technical reasons, they were added for reasons of design."

² Beijing 1997b, pp. 150, 152-5.

Body

Lid

No. 36. *Guang* (39.53)

Height 17 cm

Width 19 cm

Weight 0.79 kg

Not inscribed

Pope 1967, no. 42; Lodge 1946, pls. 7-8

An animal head with capped horns and protruding ears forms the front of the lid and extends only slightly beyond the spout. A thin notched flange runs from this head to a feline face at the lid's rear. The body of the vessel is elliptical in cross section. A diminutive handle emerges from just underneath the lip. Both lid and body are decorated in a very fine Style Va, with a variety of animal motifs arranged to fill the irregular areas offered by the *guang* shape. Surface decoration on the body is distributed over three distinct zones: the mouth and spout, the bowl, and the foot. The animal patterns on the spout increase in height from two roosting birds to an elephant to a gangling dragon at the surface's widest point. A peculiar animal, possibly a rabbit, is nestled beneath the elephant's trunk. The main register, on the bowl, contains a *taotie* face divided at the snout by a notched flange (also readable as two dragons facing the flange). A single band of peculiar fish circles the vessel's foot.

Although finishing obscures obvious signs of the casting process, it seems likely that this vessel was cast in mold with vertical divisions at the flanges. The handle is cored and according to Gettens was probably attached after casting with hard solder.¹

GH

¹ Pope 1967, p. 241.

No. 37. *Guang* (61.33)

Height 31.4 cm

Length 31.3 cm

Weight 4.59 kg

Not inscribed

Pope 1967, no. 45

Standing on four pointed legs and a pair of humanoid feet, this wild *guang* is decorated in exceptionally high relief with a profusion of motifs, some unusually naturalistic. The most powerful feature is the panting ram's head with blunt snout, open jaws and zigzag teeth at the front of the lid. Spiraling horns add to this monstrous face a curious balance of strength and elegance. Where they emerge from the ram's forehead, the horns bear little faces of their own that convert them into curling dragons. Looking at the vessel head-on, we see a second pair of horns behind the first, but they are bottle-horns belonging not to the ram but to a clawed diamond-back dragon that lies on its back. The dragon's tail coils to one side, partitioning the lid asymmetrically. One side of the lid is decorated with a tiger, an elephant and a fish, while the other side has a bird along with the same tiger and elephant. The rear of the lid is occupied by a buffalo-like *taotie* almost as imposing as the ram at the front. Two curved fish double as the buffalo's horns, two small dragons with curling tails as its lower jaws. Stubby ears project diagonally into the air.

The handle of the vessel is an equally complex and layered combination of animals or animal parts. The main component is a parrot with hooked beak and round eyes whose wings curl backward to touch the body of the vessel. Chewing on the head of this bird is a dragon-like beast with freestanding horns that shoots out from the back of the vessel, as if it must stretch its neck to seize the parrot. Below the parrot's wings we see not the tail plumes of a bird but a pair of human legs, their thighs bearing dragons that swallow their own tails.

A *taotie* that occupies the rear end of the vessel is bisected by the handle. The *taotie*'s horns are elaborately executed in high relief, its eyebrows striated, its fleshy ears carefully dished. On each half of the *taotie* face, two fangs project diagonally from the jaw (the fangs on one side of the face have broken off). These jaws gape above human heads whose strangely folded bodies zigzag down the rear legs of the vessel. The arms of these figures are marked with scale patterns, the legs with something like curly brackets. The facial features are carefully shaped, the arms are crossed at the wrist, and nipples are shown on the bare chest between the arms.

The front of the vessel body is occupied not by a *taotie* but by a bird. The bird's beak projects from the front of the vessel, its wings double as dragons curled into a recumbent C, and its clawed legs reach down onto the forward legs of the vessel. Its eyes are surrounded by a circular pattern of scales. Its ears, edged with snakes, project from the sides of the vessel. Dragons, salamanders and small birds found near the beak do not form part of the bird. Swirling *leiwens* patterns fill the few parts of the surface where nothing else is happening.

If describing this profusely decorated vessel is difficult, the problem of casting it is almost unimaginable. It was cast in only three pours of metal, one each for lid, body and handle. While each of these components was evidently cast in a two-piece mold divided along the long axis of the vessel, removing mold parts from the original clay model must have required many more divisions that have left little or no trace on the finished bronze. Though the exact moldmaking procedure remains a mystery, careful examination is suggestive. On the lid a faint, slightly off-center

mold mark starts at the back rim under the buffalo's nose, runs upward and bisects the buffalo, continues along the spine of the diamond-back dragon, and runs down the ram's head at the front. This division was not a straight line but followed the curve of the dragon's body. The three-dimensional projecting features, such as the horns and ears of the buffalo and ram, may have been cast using inset molds. In other words, small self-contained molds for each projection could have been built individually and then incorporated into the larger mold.¹ Circular mold marks are visible on the lid surrounding each projection, and *leiwen* patterns were carefully shaped and curved to fit perfectly along the edges of these marks. From inside the lid, it can be seen that the horns of the diamond-back dragon are hollow. The lid core followed the outer contours of the lid fairly closely to keep the metal thickness reasonably uniform and to avoid shrinkage defects.

The body and the handle must have been somewhat easier to cast. The mold for the body was sectioned along the front flange and on the axis of the handle, yielding two equal parts. The ears of the bird and the fangs of the *taotie* may have required inset molds, but the rest of the decoration could probably have been taken directly from the clay model. The clay-cored legs were cast together with the body; long thin openings along the two inner faces of each leg expose the gray core material. The handle was cast onto the vessel, evidently locked over tenons projecting from the vessel; metal overflow from the handle to the vessel is clear. Core material is exposed on the inside face of the handle, and at the lower end of the handle a squarish protrusion emerging from the core may be one of the tenons that serves to attach it. Mold marks seem to have been carefully ground down, as for instance on the forehead of the lid buffalo.

A closely related *guang* in the Fujita Museum, Osaka, appears to be a little tamer and less peculiar.² The *taotie* at the rear no longer chews on a human head, and on the handle an elephant trunk replaces the intriguing humanoid legs of the Freer vessel. Nevertheless both *guang* display

a preoccupation with real animals characteristic of bronzes from the middle Yangzi region.³ The use of so many naturalistic motifs as space-filling elements contrasts strongly with the more artificial dragons, *taotie* and birds of the Anyang culture.⁴

The most conspicuous of the interacting motifs are the ferocious *taotie* and the squashed human it holds in its jaws. In the south this combination has a history. The earliest known example is found on a *zun* from Funan in Anhui province.⁵ In each compartment of the main register, a tiger head with two bodies holds the head of a smiling human figure. The conventional *taotie* design is pushed into the corners of the compartment. A related design, later and more dramatic, is a famous *yao* in the Sumitomo Collection in the shape of an upright tiger embracing a human figure, its upper jaw hovering over the human head.⁶

The Freer *guang* is further distinguished by its four pointed legs and its pair of structurally unnecessary humanoid feet. The *guang* shape normally has a ring foot (see for example Nos. 35-6). In the few cases where the ring foot is replaced by four legs, the legs are shaped like those of an animal, and we are evidently meant to see the entire vessel as the animal to which the legs belong.⁷

On a *guang* in the Metropolitan Museum, a bird inhabits the front and a tiger the rear of the vessel.⁸ The claws of the bird and the tail of the tiger extend from the body onto the ring foot, boldly crossing the plain line of the horizontal division between body and foot. Crawling up the bottom of the handle is an upside-down dragon whose tapering body curls away from the vessel into a loop. The small hooked beak of the bird at the front is executed in three dimensions directly below the pouring spout, just like the much more prominent beak on the Freer *guang*. If we imagine replacing the ring foot of the Metropolitan *guang* with four pointed legs, while keeping its surface decoration in place, the claws of the bird will fall naturally onto the front legs of the vessel. If we then allow the body of the curling dragon at the back to reach down as far as

the four legs do, the result will be a new *guang* with a silhouette very similar to the Freer vessel. If Bagley is correct in suggesting that the Metropolitan vessel is a very early example of the *guang* shape – the lidless ancestor of *guang* with lids that carry tiger or monster heads at the front⁹ – then the Freer *guang* is oddly inspired by vessels both near to and distant from it in time. Clearly the decoration of its body is derived from a *guang* type very different from the one that supplied its lid.

DTL

¹ Inset molds are discussed in entry No. 21.

Alternatively, it is conceivable that the lid was cast without using inset molds, but this would have required a large number of mold sections and some sort of breakaway model that could be taken apart and put back together as necessary in the process of forming those mold sections.

² Bagley 1987, fig. 74.5.

³ Bagley 1987, pp. 32–6, introduction section 1.12, offers a comprehensive review of naturalistic motifs in southern casting.

⁴ Compare Nos. 35 and 36, the latter in particular representing a more conventional northern *guang*.

⁵ Beijing 1996a, pls. 117–19; Bagley 1987, fig. 80.

⁶ Bagley 1987, fig. 179. See also Hamada 1934, pp. 71–2, pl. 23.

⁷ See Beijing 1997b, pl. 149 for a *guang* from Fu Hao's tomb at Anyang shaped as some sort of four-legged animal.

⁸ Bagley 1987, fig. 149. See also Beijing 1997b, pls. 158–9.

⁹ Bagley 1987, p. 31.

Fig. 37.1. Side view of lid on *guang* No. 37.

Fig. 37.2. Top view of lid on *guang* No. 37.

No. 38. Lid (74.3)

Diameter 23.7 cm

Not inscribed

In the shape of a low dome, this circular lid contains a single decorated zone between a molded lip and an undecorated central disk. Three tigers prowl the circumference, their attention focused on the center of the lid, where presumably some object of prey was once attached through the small hole that remains. Like the tigers on the *guang* No. 37, which they resemble closely, they are set against a background of *leiwen*. The designer of this lid, however, must have thought of his tigers as something more than members of an ornamental menagerie, for he presents not just the tigers but the relationship between them and their prey.¹ While the high relief of the tigers is not modeled with attention to anatomy, engraved lines on the torsos and spirals on the haunches and shoulders approximate stripes and musculature. The heads are fully three-dimensional. In the area above the tail and spine of each tiger, curling blank filaments mingle with *leiwen*, meant perhaps to suggest motion.²

The bulk of the lid was probably cast in a two-piece mold. Although the underside shows

evidence of extensive and clumsy modern repair, it can be seen that uniform thickness was maintained by hollowing out the insides of the tigers. Examination of the underside also reveals that the tiger heads are hollow and were pre-cast; this is confirmed on the exterior by traces of metal overflow from the necks onto the heads. Whatever prey once occupied the center of the lid was probably cast on through the hole there.

GH

¹ In this respect, compare for instance the interacting *taotie* and humans on the rear legs of No. 37.

² In a regrettably unpublished landmark study, Robert Bagley has suggested that these speedy filaments may be the earliest precursor of a graphic convention more familiar from the Garfield, Felix, and Heathcliff cartoon series (Bagley unforthcoming, p. 12).

No. 39. *Zun* (36.6)

Height 17.5 cm

Length 21.3 cm

Weight 1.30 kg

Not inscribed

Pope 1967, no. 40; Lodge 1946, pl. 24

This *zun* is an elephant-shaped vessel on whose lid stands a much smaller elephant. Well-placed notched flanges on the trunk and tail articulate the curve of the elephant's figure and give a feeling of constant motion from one end of the animal to the other; prominent eyebrows, forehead, and tusks lend a measure of ferocity. The body of the larger elephant is covered in *leiwen* which extends from the edge of its face to the top of its toes. The most prominent of the motifs that decorate the body is a large eye surrounded by a scalloped border on the elephant's belly, above which is a dragon-like creature. The pieces of a disintegrating *taotie* adorn the elephant's front legs. A *taotie* on the elephant's rear end is bisected by its tail. The face of the elephant is undecorated, except for some intaglio lines around its high-relief eyes and its striated eyebrows, which protrude in high relief. In between the ears, which are fully three-dimensional, the elephant's forehead has a pair of curious knobs, spiralling and striated. The underside of the elephant is undecorated. The smaller elephant perched on the lid is not decorated with *leiwen* or high-relief ornaments but only with fine lines serving as an abstract substitute. The lid on which it stands carries four spiralling snakes with striated bodies.

Let us disregard the lid and ask how the caster constructed the mold for the larger elephant, which appears to have been cast in one pour. Presumably he began with a fully decorated model of the elephant and enveloped it in the clay that was to become the mold. Where would he need to slice open the clay envelope in order to remove it from the model in the smallest possible number of sections? The most immediately apparent mold division, evidenced

by mold marks on the long axis, ran from the elephant's head to its tail. A further division may have been made on each side of the elephant, just forward of the rear leg. The underside of the vessel and the inner faces of the legs are bare of decoration; a mold mark that runs up and down each leg, across the belly, and across the elephant's throat surrounds this undecorated area and suggests that it was formed by a separate mold section. Thus the mold appears to have had five sections, plus whatever was required to make the elephant's face and trunk. Here the mold was complicated, and traces of mold divisions are faint and uncertain. There was probably a division on the central axis of the face (and the back of the trunk). The front of the trunk required a mold section of its own, and the forward-facing tusks must have further complicated this part of the mold. Abrasion lines on the lower half of the elephant's face indicate heavy finishing and suggest that mold marks were carefully removed.

A drilling made on the inside of one leg shows that a clay core extends the full length of the leg but not through into the body cavity.¹ Radiographic examination shows that the trunk is hollow; both ends are open but the middle section is filled with clay. The surface of the vessel is uniformly covered with a smooth, yellow-green patina of tin oxide one to two mm thick. The lid rests loosely on top of the large elephant and displays six small pierced holes, four in the front of the lid and two in the back. No spacers are visible in either body or lid. In some areas of the vessel, corrosion has penetrated so deeply that sharp edges of the decor are crumbly and fragile. To prevent further damage the lid was secured to the body in the late 1980s.

The particular genius of this piece lies in the way the designer adapted the dragon and *taotie* motifs, which were normally used to fill the regular spaces defined by mold divisions on round or square vessels, to decorate the far from regular spaces of the elephant's body. He struck a deft balance between the features of a real elephant and the decorative elements of a Shang bronze vessel. Rounded *leiwen* create a textured surface that might be taken for the wrinkles on an elephant's skin, while the high-relief *taotie* and dragons of late Anyang decoration are broken up and shaped as necessary to fit the irregular contours of an animal. The otherwise undecorated face, ears, and trunk of the elephant carry deep, bold intaglio lines like those found on the high-relief ornaments that decorate the elephant's body.

An elephant-shaped *zun* very similar to the Freer *zun* has been unearthed in Hunan Liling.² A very different, much larger elephant now in

Paris is rumoured to be from Changsha.³ No elephant-shaped bronze has yet been found at Anyang or elsewhere in the north, and it remains uncertain whether three-dimensional elephants were ever cast at Anyang. On the other hand the Freer and Liling elephants, unlike the one in Paris, have nothing southern in their decoration, suggesting that Anyang manufacture cannot be ruled out.⁴

DMF

¹ Pope 1967, p. 230–31 (technical observations by Gettens).

² *Wenwu* 1976.7, pp. 49–50.

³ Bagley 1999, fig. 30b.

⁴ Bagley 1987, p. 35.

No. 40. *He* (42.1)

Height 18.5 cm.

Width 21.0 cm.

Weight 2.78 kg.

Not inscribed

Pope 1967, no. 39; Lodge 1946, pls. 13-14

The wide-eyed bottle-horned face that forms the lid of this *he* instantly brings the vessel to life. Its round protruding nose, fat thick lips, and densely scored crescent-shaped eyebrows seem to tell us that the face is human, and the wrinkled forehead adds a further touch of liveliness – but this face has horns, and its identity becomes more puzzling still when we notice the diamondback lozenge-filled snake body that begins at the back of the lid and coils around the vessel. We cannot doubt that the face on the lid belongs to the snake on the vessel, for the first lozenge on the snake is not quite complete on the lower part of the vessel, its tip continuing up onto the back edge of the lid. Nor is the creature an ordinary snake, for in addition to its horned human head, it has clawed forearms reaching toward the spout of the vessel. One edge of its body is lined with a series of rounded scales, perhaps to suggest the underside of the creature, but the other edge is bordered with a pattern copied from flanges.

The tubular spout at the front of the vessel is framed by the gaping mouths of a pair of bottle-horned dragons. The bilateral symmetry of these paired dragons and the adjacent clawed arms is shared by the face on the lid but undercut by the rest of the design. Because of the winding snake body, the vessel is subdivided unsymmetrically, yielding spaces that the highly symmetrical *taotie* is unsuited to fill. Behind the arms, accordingly, the proper right side displays a bird, the left side a dragon. All the relieved elements are decorated with simple swirling patterns in sunken lines and surrounded by a fine *leiwen* ground. Paired animal-head lugs above the elbows of the clawed arms sit directly underneath the pair of perforated ears on the

lid, suggesting that a perishable handle (e.g. a rope) might once have been secured through the body and lid.

The body and lid were cast separately, each in a three-piece mold. The mold marks were carefully ground down. On the lid, one mold division was made down the nose and across the mouth, another on the axis of each bottle-horn. On the body, one mold division was on the axis of the spout, another just beyond each lug, descending along the back edge of the creature's upper arm. Horizontal mold marks appear at the upper and lower edge of each lug. They might be additional cuts made to facilitate the removal of the mold section, or they could be traces of inset molds.¹ The ring foot, decorated with bold spirals, has three symmetrically placed squarish holes through which the foot core was suspended; they lie on the mold divisions. Inside the lid, all the relieved facial features are indented and the bottle-horns are hollow. Spacers are faintly visible in the plain band under the bulging body on the underside.

The composition seen on this *he* of a human face, bottle-horns, snake body and clawed forearms is unique. While human faces are becoming more common with archaeological excavations,² I have not found another example in which they are combined with snake-like bodies. Furthermore, most of these other faces are highly stylized and lack the naturalistic appeal of the Freer vessel.³ Perhaps closest to the Freer face are the faces on an extraordinary *fang ding* from Ningxiang.⁴ On each side of the *fang ding*, a human face replaces the conventional *taotie*, yet the *taotie*'s C-shaped

ears and S-shaped horns and claws remain as appendages. If we interpret the motif on the *fang ding* as a hybrid of human and *taotie*, this might constitute some sort of link with the hybrid on the Freer *he*. Another interesting combination of human face and animal is seen on a bow-shaped bronze in the Shanghai Museum: two human faces with S-shaped horns and sharp claws are attached to the tapering bodies of two cicadas.⁵ Such imaginative combinations may be characteristic of southern casting.

The combination of a pouring spout and a face suggests a few interesting comparisons. An Erligang-period *he* vessel from the Brundage Collection in the Asian Art Museum of San Francisco has a pair of eyes drawn on the top and a molded nose.⁶ When viewed from above, two of the three lobed legs become ears or horns, and together with a wide opening on the top, they form a smiling cat-like face. Later and far more dramatic are three famous *he* vessels in the Nezu Collection in Tokyo, whose lids are occupied by *taotie* with prominent clawed forearms.⁷ Instead of holding the spout, on each vessel these clawed arms surround an opening on the top, claiming it as the mouth of the *taotie*. The long tubular spout, decorated lavishly with two dragons, projects from the forehead of the *taotie*.

The layout of decoration on the Freer *he* vessel is very clever. By comparing this *he* with *pan* decorated with coiling dragon designs, Xu has argued persuasively that the layout translates a two-dimensional motif into three dimensions.⁸ In most cases, the coiling dragons in *pan* have a bottle-horned *taotie*-like face and a snake's body (see *pan* No. 41).⁹ Since a *taotie* will not comfortably fill a round space, it is conceivable that the designer of the lid of the Freer *he* had a compositional motive for replacing the *taotie* with a human face.¹⁰ Whatever the reason for the substitution, since the two-dimensional motif, in taking on a third dimension, begins to take over the vessel's volume as its own, what we see here is in principle similar to *guang* vessels on which animals such as tigers and birds take over the shape.¹¹

DTL

¹ See No. 21 for discussion of inset molds.

² See Chen 1994 and Peng 1994 for examples of human faces unearthed at Sanxingdui in Sichuan province and Xin'gan in Jiangxi province.

³ See Bagley 1987, figs. 133 and 134 for other naturalistic designs of human faces. In both cases (the handle of the *Si Mu Wu fang ding* and a mask), the objects were found in the Anyang area, so it does not seem that naturalistic human faces by themselves were exclusive to bronzes from the south.

⁴ Bagley 1987, fig. 187.

⁵ Beijing 1997b, pls. 212–13.

⁶ Bagley 1987, fig. 23; see also Loehr 1968, no. 7 (detail on p. 176).

⁷ Beijing 1997b, pls. 141–3; see also Mizuno 1959, pp. 43–4.

⁸ Xu 1998 relates this human-snake hybrid to diamondback dragons, which are found commonly on Shang period bronzes as handles and shoulder decorations. Xu suggests that the Freer *he* is a southern variation of the popular diamondback dragon motif, rendered as a three-dimensional sculpture. He makes comparisons with examples such as the coiling dragon of the Wenling *pan* (Guggenheim 1998, no. 29) and the clawed diamondback dragon of the *guang* No. 37, both of which are certainly southern castings.

⁹ For more *pan* with coiling dragons, see Beijing 1997b, pls. 167–9 (excavated examples).

¹⁰ Lodge in 1942 compared this vessel with one catalogued in the *Xi qing gu jian* (vol. 14, no. 10). He wrote, “it is a *kuei* [gui] ... and has a circular cover in the form of two animal faces, one with bottle-shaped horns, the other with spiral horns and both with small, leaf-shaped ears. These faces confront each other and share a common mouth which extends across the middle of the cover. On the vessel – which closely resembles the vessel of our *luo* [he] in shape – a serpentine body belonging to one of the faces is disposed in much the same way as on our *luo*. I assume, however, that the other face is also provided with a similar body, so that what the illustration shows is the beginning of one body turning off to the left, and the latter part of the other body coiling around the vessel from the right. On both bodies is a pattern of concentric

dimensional space, the caster of the *gui* resorted to a different solution than that of the Freer *he*, dividing the round lid in half to obtain two semicircular portions. These more nearly rectangular spaces

allowed *taotie*-like faces to fit more comfortably, so the caster created not one but two diamondback dragons.

¹¹ See No. 35 and Bagley 1987, fig. 150.

No. 41. *Pan* (56.26)

Height 12.3 cm

Diameter 32.4 cm

Weight 5.30 kg

Possibly inscribed

Pope 1967, no. 3

This vessel consists of a shallow round basin supported on a ring foot. The basin has a slightly everted rim and a molded edge. Its interior is dominated by a coiled dragon: although many other creatures are depicted along with it, it is the dragon's high-relief eyes and *taotie*-like head that capture the viewer's attention. The dragon's nearly symmetrical face is decorated with swirling *leiren* in which eyebrows, snout, and jaws stand out primarily because of their lack of decoration. The snake-like body is bordered on both sides by a notched strip of alternating T's and lines and decorated with a diamondback pattern of lozenges and half-lozenges reminiscent of a real snake's back. The coiled body leaves irregular spaces for the decorator to deal with: one of the dragon's bottle horns looks almost compressed by the body arching over it, the other shares its irregular space with a couple of peculiar zoomorphs. Three animals—a bird, a tiger and a fish—move clockwise along the inside rim of the vessel and are reproduced in the same order three times. A small diamond accompanied by two X-shapes located on the dragon's forehead, at the centre of the vessel, might be an inscription, but if so its meaning is unknown.

On the exterior, dragons fill a register on the side of the basin; flange markings on their backs are similar to the flange markings on the coiled dragon inside. The dragons face three small flanges protruding from the sides of the vessel. Beneath them is a fringe of pendant triangles. The foot is decorated with dragon- or bird-like animals processing around the register. Three of these are slightly disfigured at the mold-join lines, which coincide with three holes in the foot. The deep intaglio lines of the decoration are

of varying width and are filled with a black resinous substance.

The motif of the coiled diamondback dragon is very common and, as Jay Xu has argued, was one of the most versatile motifs of the late Shang period.¹ The earliest examples occur on the handle of a round-bodied *you* excavated in Zhengzhou, Henan province, which dates from the thirteenth century B.C.² Here the dragon forms the bail handle, which is decorated along its length with a lozenge and half-lozenge pattern and attached to the vessel with two heads partly reminiscent of snakes, partly of *taotie*. Similar handles can be found on later bronzes; the dragon is sometimes straight and sometimes coiled (as in a *you* found in a tomb in Xin'gan, Jiangxi province).³ The coiled diamondback dragon was even used to form the spiralling area where the wing joins the body of a parrot-shaped *zun* unearthed at Anyang from Fu Hao's tomb.⁴ Clearly the flexible shape of the motif was an asset: straightened out, it could be used to decorate a straight handle; coiled, it could be used to decorate a round space. Its head, which could either look like a snake or could take the form of the imaginary *taotie*, and which could be made almost any size relative to the dragon's body, gave it further versatility: a large head with a smaller body coiled around it could adequately fill the surface of a large *pan* vessel, while a small head in high relief at the end of a well-proportioned uncoiled body could accent the shoulder of a *zun* vessel.⁵

The British Museum owns a vessel similar to the Freer *pan* on which tigers, fish, snakes, and dragons encircle the coiled dragon at the center.⁶ The British Museum *pan* has a higher foot and a shallower bowl than the Freer vessel, and the

animals circling the dragon move counter-clockwise. A similar though less elaborate *pan* from Fu Hao's tomb is inscribed with the name Fu Hao, suggesting that both the Freer and the British Museum *pan* are northern castings. Nonetheless, this *pan* design also had a rich history in southern China. An enormous *pan* unearthed in Wenling, Zhejiang province in 1984 features a deep basin that is undecorated except for a coiled diamondback dragon in high relief whose bottle-horned head springs forth from the vessel in three dimensions, and whose body is similarly bordered by a notched ridge.⁷ From the shape of the dragon's eyes and nose to its bottle-horns, there can be no doubt of a connection or common inspiration linking this vessel with the Freer *pan*, but it is unclear

whether their similarity means that the vessels were cast in nearby places or simply that their design had wide currency.

DMF

¹ Xu 1998.

² Beijing 1996a, pl. 136.

³ Peng 1994, pl. 33-1.

⁴ Beijing 1997b, p. 114.

⁵ Bagley 1987, fig. 80.

⁶ Rawson 1987, no. 21.

⁷ Guggenheim 1998, fig. 29.

No. 42. *Yu or gui* ([18]94.17)

Height 18.1 cm

Diameter 25.4 cm

Weight 3.43 kg

Not inscribed

Pope 1967, no. 62

This *yu* is a handleless thick-rimmed bowl supported by a ring foot.¹ The decoration is divided into three registers, each with a *leiven* background. Just underneath the rim is a register in which twelve dragons face towards high-relief bovine heads and away from three notched flanges. Below is the main register, which is composed of three fanged *taotie* separated from each other and bisected by six notched flanges. On the foot, which does not carry flanges, six large dragons face in the same directions as the smaller ones in the uppermost register. At the top of the foot are three small rectangular holes, probably left by spacers that supported the foot core during casting. The vessel is comparable in shape and design organization to an *yu* in the Sackler Collections whose surface has survived in better condition.²

While the polishing of this vessel has obscured most traces of casting procedure, it appears to have been cast in one piece in a mold of three sections (perhaps removed from the model in six pieces that were rejoined in pairs). There is evidence of mold marks on the flanges and the bovine heads as well as between adjacent dragons in the lower register. There also appear to be metal spacers just below the main register.

The glossy brown surface has been polished and waxed to the point of losing much of the original design; the sunken lines on the raised

parts of the *taotie* have almost disappeared. In some spots it appears as if the *leiven* pattern has been chiseled to restore the lost depth. Judging by the golden bronze color inside them, even the three rectangular holes at the base have been filed to give them a more regular shape. The vessel now seems to be somewhere between Loehr's Styles IV and V; before polishing, the design may have been in higher relief. The dragons on the foot are perhaps less abraded and closer to the original effect than the registers higher up. At the end of one *taotie* horn and also on its shoulder are white, red and green spots with a fine woven cloth pattern in them, suggesting that the vessel was wrapped in cloth when it began to corrode. Beyond the rough cleaning, retracing of lines (perhaps with a chisel), and polishing, the vessel does not seem to have been altered or repaired.

CFH

¹The vessels here called *yu* (Nos. 42 and 43) are by many authors called *gui*. Bagley cites inscribed examples that refer to themselves by name, sometimes as *yu* and sometimes as *gui* (1987, pp. 499-500).

²Bagley 1987, no. 97.

No. 43. *Yu or gui* (41.8)

Height 21 cm

Diameter 14 cm

Weight 2.41 kg

Inscription of two characters

Pope 1967, no. 61; Lodge 1946, pl. 9

This finely cast *yu* is a bowl with an S-shaped profile set on a straight foot. It is divided into six sections by notched flanges that break between body and foot and that extend beyond the crisply molded lip. Alternate flanges are interrupted also to make room for small three-dimensional animal heads set just above the main register, on the axes of the *taotie* below.

The *taotie* which fill the main register are composed of disconnected parts raised in high relief and, except for the eyes and the edges of the horns, covered with tight curvilinear *leiwen*. The C-shaped horns are bordered by a strip of flange-like decoration; this strip is faintly concave and slightly lower than the rest of the horn. Flanking the *taotie* are downward-facing dragons. The background to the animal motifs is a deep, crisp, square *leiwen* pattern that often spirals into the curves of the relieved elements.

The register just under the molded rim is decorated with tapering blades containing downward-facing cicadas. On the *yu* shape these are not very common, certainly not by comparison with *jia* (e.g. No. 8) or *ding* (where they taper toward the bottom of the vessel: No. 46). Below the blades is a register containing bird-like dragons opposed in pairs about the animal heads on the central axis. The dragons have beaks, and their eyes have slit pupils, contrasting with the dotted pupils of the *taotie* and the dragons on the foot. The thin horizontal line through the *leiwen* that separates this register from the *taotie* register below it coincides with small barbs in the flanges.

Pairs of opposing dragons adorn the foot. These dragons differ from those in the uppermost register in that their horns are C-shaped, their eyes take the form of pupils rising in high relief from a blank surround, and their lower jaws curl

inwards. All these features echo those of the *taotie* just above.

The decoration is extraordinarily deeply carved and flawlessly cast. Mold marks, visible only under the flanges, suggest a six-division mold. The vessel was clearly cast in one piece, but there are no mold marks on the animal heads, suggesting possible use of inset molds.¹ Spacers visible in the base of the bowl just above the foot are symmetrically placed. The patina is a gray-green tin oxide.

Style Va is Loehr's term for high-relief decoration in which both raised parts and ground are covered with *leiwen*.² Examples vary not only in quality of execution but also in the distinction, if any, between the *leiwen* on the raised parts and the *leiwen* of the ground, and consequently in the forcefulness or restraint of the design. The present *yu* strikes a particularly effective balance between its small but flanged shape and its subdued but clearly readable decoration. On the *fang jia* No. 8 the understated decoration is somewhat overpowered by the monumental shape. At the opposite extreme, on the *gu* No. 9 the shape is less assertive and the *leiwen* is so astonishingly fine as to distract attention from anything else.

The inscription is a combination of two elements, the graph *yi* (in oracle-bone script, a human figure seen frontally with a mark under each arm³) and the drawing of a chariot. The chariot has yokes for two horses; the inscription in the Freer *gu* No. 11 includes a chariot with yokes for four horses.

NRL

¹ Inset molds are discussed in the entry for the *you* No. 21. While the evidence that inset molds were used is more compelling on No. 21, the absence of mold marks from the heads of this *yu* certainly raises the possibility of a mold more

intricate than the three-piece six-division mold suggested by Gettens in Pope 1967, p. 344.

² For further discussion of Style Va see the entry for the *gu* No. 10.

³ Shima 1971, p. 32.

No. 44. *Ding* (60.18)

Height 24.8 cm

Width 20.3 cm

Weight 3.4 kg

Inscription of one character

Pope 1967, no. 28

A broad bowl and distinctly splayed legs give this tripod a poised, energetic stance. Accentuating this lively appearance is the craftsman's purposeful alignment of the lugs, vertical flanges, *taotie* decoration, and legs, which makes the piece unmistakably animal-like in shape as well as decoration. The tapered lugs thicken at the top and vaguely suggest ears, while the notched flanges alternately frame and form the snouts of the three *taotie* which adorn the bowl. Surface decoration on the bowl is typical Style IV and very finely done. The smooth decoration is accented by a reddish patina which covers the sunken parts of the surface uniformly.

Faint mold marks on the underside indicate a typical three-section mold divided along the axes of the legs, with a fourth section for the underside and the backs of the legs. Openings to the leg cores at the midpoint of each leg were covered

with cast-on patches. Casting the vessel upside down probably allowed the craftsman to forego coring the lugs.

The inscription of one graph has suffered from destructive cleaning that has left its authenticity in doubt. Barnard reads it as *fu* or *fou* "mound," but Shima's concordance of oracle inscriptions includes no instance of the present graph and gives the reading *fou* instead to a slightly different graph.¹

GH

¹ Shima 1971, p. 178.

No. 45. *Ding* (59.15)

Height 20.7 cm

Diameter 16.3 cm

Weight 1.87 kg

Inscription (doubtful) of four characters

Pope 1967, no. 29

A diamond-and-boss pattern that covers almost all of the bowl of this *ding* is its most conspicuous feature. Above it, punctuated by six small flanges, is a narrow band of beaked dragons opposed in pairs, slightly raised in relief and decorated with *leiven* resembling the ground they are set against. Two handles that widen and lean outward at their tops are perched on the lightly molded rim. The legs, bare of decoration, splay outward.

The diamond-and-boss design is rather irregular, suggesting haphazard planning by the designer, though the execution of the sunken lines is quite sharp. The bosses rise to a uniform height, but the rectangular meanders that surround them vary in width and shape. The lower border of the main register is also uneven, high between the legs and dipping to meet the legs. The narrow band above the main register also wanders a little, not maintaining a uniform height on the side of the bowl.

Mold marks are prominently visible on the axes of the legs. Only in one case can the mold mark be followed onto the leg, but it seems clear that the legs and also the handles were cast in one piece with the rest of the vessel. The thickness of the mold marks and their deviation from the centers of the legs suggest that the caster had problems laying out the design on the model. The thirds of the vessel vary in width by as much

as a centimeter and the legs are displaced accordingly. The handles are not quite a diameter apart.

Cloth impressions are visible on some of the bosses, suggesting that the vessel was wrapped in cloth before burial. A hole is visible on the inside face of each leg, exposing the clay core. The patina is a light gray-green. The black pigment in the sunken-line designs is at least partly paint added in modern times.

The four-character inscription is unlikely to be original and according to Gettens appears to be etched.¹

The diamond-and-boss pattern seen here is a common decoration for round vessels. A *ding* in the Musée Guimet bearing the pattern is unusual in that the dots are not raised.² Closer to the Freer vessel is a *ding* in the Brundage collection with a different band of dragons about the top.³

NRL

¹ Pope 1967, pp. 166–8.

² Bagley 1987, fig. 106.

³ d'Argencé 1977, p. 19. Compare also two *ding* illustrated in Beijing 1997a, pls. 26 and 38.

No. 46. *Ding* (46.31)

Height 35.6 cm

Weight 10.21 kg

Inscription of one character

Pope 1967, no. 30

This large *ding* is a circular bowl supported on three nearly cylindrical flat-footed legs. The rim of the bowl has a molded edge much thicker than the rest of the vessel wall. Handles cast as a part of the vessel stand on the rim on opposite sides of the bowl. A little below the rim is a register of nine Style V *taotie* on a deeply cut background of rectangular *leiwen*. The drastically abbreviated bodies of these *taotie* are nothing but clawed legs with tails emerging from their elbows. To squeeze so many small *taotie* into a single narrow register, where dragons or birds would be more comfortable, is unusual. In the register below are eighteen vertical cicadas in triangles of *leiwen*. This design element is common on *ding* vessels, probably because, like the blades on *gu* vessels, it was well suited to filling a space of rapidly changing diameter.¹ The remainder of the outside of the bowl is plain. The legs are decorated with a simplified version of the bowl's design scheme, a narrow band of curves bringing the *taotie* register to mind while decorated triangles beneath recall the cicadas. The legs of No. 44 bear similar decoration.

An inscription of one large unidentified character appears inside on the bottom. It resembles the oracle-bone character for "boat"² written twice, with a cross inserted to join the two boats. No similar character is found in Shima Kunio's concordance of oracle inscriptions.

This *ding*, including handles and legs, was probably cast in one pour in a three-piece section mold. A prominent mold mark runs up the outside of each leg, through the cicada above the leg, and through the *leiwen* between two adjacent *taotie*. An irregular bump of metal on the bottom of one leg could be a sprue remnant. A very clear

patch on the inside face of each leg appears to be ancient. The pattern of triangles continues over the patches but is less fine than elsewhere on the legs. The patches were probably inserted to cover openings through which the clay cores of the legs were supported during casting. The irregularity of surface color makes it difficult to detect any spacers, although Gettens reports detecting some on the underside in the inter-leg area.³

Though the design of this vessel is composed of many small repeated elements, they were all executed independently, as seems to have been standard practice in Shang foundries. Each of the *taotie* in the main register is unique, as is each of the eighteen cicadas, and the *leiwen* around them is also clearly not a replicated pattern. The cicadas vary slightly in size; one of them has three sunken lines on its back while others have four and most have five.

The surface is generally gray-green, with some spots rougher than others. A very noticeable line of rough corrosion, possibly caused by a water line, can be seen inside the vessel. There is no evidence of modern repairs.

CFH

¹See e.g. Chen 1977, pp. 284-94, and Bagley 1987, nos. 82-5. The "cicada-on-a-triangle" seems second only to the ubiquitous *taotie* as a filling for the surfaces of *ding*.

²Shima 1971, p. 462.

³Pope 1967, p. 175.

No. 47. *Li ding* (47.11)

Height 21.9 cm

Diameter 18.1 cm

Weight 2.64 kg

Inscription of one character

Pope 1967, no. 31

This *ding* has three lobes which taper towards the long straight legs. Heavily scored flanges, interrupted between the upper and main register, run down the lobes towards the legs. Additional short flanges confined to the upper register lie between the legs. Two handles on the molded rim are placed symmetrically with respect to one of the legs and might be taken to define the front view of the vessel, the view shown in the accompanying illustration.

Each lobe carries a flange-centered *taotie* whose bodies tilt upward a trifle, giving it the look of diving towards the leg of the vessel. Elongated to fill the space available, these *taotie* are executed in a carefully shaped high relief, embellished with bold sunken lines, and set on a *leiven* ground. Their horns and ears are in concave relief, the bodies are smoothly convex, and the tips of the horns, tails, and jaws spiral into the highest relief. In the register above the *taotie* are long curving dragons which face away from the central flange. The legs, splayed outwards a trifle, are decorated on their outer portions in sunken line with crudely drawn pendant triangles, perhaps abbreviated cicadas. The bottom of the vessel is undecorated.

Mold marks can be seen under the long flanges; evidently they continued down the legs but were carefully ground away. The handles show no sign of being cast separately from the rest of the vessel. Three spacers are placed symmetrically in the bottom of the vessel. A patch was cast onto the inner face of each leg to seal the opening through which the leg core was supported during casting. The casting is very fine with no visible repairs or casting defects. The patina is a light green. There is evidence of black pigment deep in the grooves of the *leiven*.

An inscription of one character in the bottom is composed of two elements, probably a halberd (*ge*) and an ear. It is not particularly well written and Gettens seems uncertain of its authenticity.¹ The character does not have an obvious counterpart in the oracle-bone inscriptions but it does occur on a few other bronzes, including three listed by Chen Mengjia.²

The *li ding* shape lends itself well to decoration with three *taotie* as long as they are suitably drawn to fit the upward-sweeping spaces offered by the vessel's lobes. The *taotie* on this *ding* have long bodies that slant upward, and their tails curl back to spiral toward their horns. The dragons in the upper register are similar to those on the *pou* No. 34, with the same concave relief and sparse sunken-line decoration, but instead of enclosing a dot pattern they swirl into fine *leiven* spirals.

NRL

¹ Pope 1967, p. 178.

² Chen 1977, vol. 1, p. 94, A469.

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